

Visual Transformation of the Ancient Serat Menak Jayengrana Manuscript into Wastra Artwork

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ABSTRACT

Ancient manuscripts represent a wealth of local wisdom, encompassing aesthetic dimensions, spiritual experiences, and religious appreciation. The illustrations contained in these manuscripts have not provided much inspiration for local wisdom implemented in the creation of batik motifs. The purpose of this study is to reveal the aesthetic values of the images contained in Serat Menak, so that they can be used as an alternative in the development of Wastra art. The qualitative descriptive method was chosen in this creation research. The research location is in Solo and Yogyakarta. The research stages are; literature studies, field observations, visual data processing, and visual transfer into wastra artwork prototypes. The sample of this study is a batik motif carrying the Jayengrana theme. The results of this study are batik motifs made with the Jayengrana theme. The findings are; a piece of wastra cloth contain aesthetic, educational, and historical values with a Javanese cultural background originating from the palace environment. It also has a novel value in creating batik motifs on a national scale that can help develop the creative batik industry in Indonesia.

Keywords: Ancient Manuscript, Batik, Jayengrana, Javanese, Serat Menak

INTRODUCTION

The images contained in ancient manuscripts are part of the local cultural wealth containing various information conveyed through simple visuals in their time (Damayanti, 2019; Syarif & Kurniawati, 2018). Research on images contained in ancient manuscripts plays an important role in efforts to preserve and understand local cultural wealth. These images contain various information conveyed through simple visuals in their time, reflecting the beauty and aesthetic richness of the past (Diringer, 1958; Garrison, 2002). The beauty of ancient manuscripts which is a combination of ornaments that decorate the side of the text or images that complement this text has attracted the interest of many researchers from within the country and abroad. However, there is still very little research carried out by academics to explore this potential and connect it to the creative industry.

One of the main challenges in this research is the physical condition of the ancient manuscript which is often worrying. Many images whose identities are unknown, often become blurry due to age. The ink used fades, the paper is prone to tearing, and humidity accelerates damage (Gusmada & Nelisa, 2013; Khafidlin, 2021).

These conditions certainly are not conducive for the research process. The researcher's experience shows that accessing ancient manuscripts that are placed in separate rooms from public libraries requires complicated and time-consuming bureaucracy. When access permission is granted, researchers are not allowed to open the manuscript in its entirety because of its old age and fragility. This results in lack of research on the illumination or images contained in ancient manuscripts.

This condition is actually a great opportunity for the research team to do deep research on images in ancient manuscripts. The existence of ancient manuscripts in various regions of Indonesia allows the disclosure of historical value and aesthetic beauty contained therein. Images in ancient manuscripts, through in-depth research, can be a source of inspiration for the development of batik motifs in the creative industry.

For example, the ancient manuscript *Serat Menak Jayengrana* has a series of texts that do not have a visual form. The figures in this manuscript are not visualized with a side view, but the text has a distinctive storytelling character. This uniqueness can be used as a prototype for wastra art and a solution for downstreaming to the creative industry. Although many researchers are interested in studying the *Serat Menak* manuscript for its language and literature, very few researchers have studied how to translate it visually into wastra arts. This is a great opportunity to explore from the perspective of artwork, engineering, and textile crafts. This cross-disciplinary approach allows the ancient manuscript to be dissected from various scientific perspectives, resulting in a more comprehensive integration of knowledge. By exploring and deeper understanding of the texts in ancient manuscripts, we can preserve and revive nearly extinct cultural heritage. Cross-academic collaboration can create innovative products that are rooted in the richness of local culture. The importance of this research is not only limited to the development of science, but also has the potential to make a real contribution to the economy (Basa, 2019; Pandanwangi, Alya, et al., 2023). By elevating ancient manuscripts to be the inspiration for creative products, we can encourage local industry and create new jobs. In addition, local culture-based products have their appeal in the global market, opening up profitable export opportunities. In a broader context, this research can strengthen national cultural identity. Through a better introduction and understanding of cultural heritage, the younger generation can appreciate and love their own culture more. This can also strengthen the sense of pride and importance of preserving culture for the future.

Overall, research on images in ancient manuscripts is an important step in preserving and utilizing local cultural wealth. Despite facing various challenges, there are huge opportunities to raise and utilize ancient images as inspiration for the creative industry. With a cross-disciplinary approach, collaboration, and innovation, it is possible to create products that are not only of high aesthetic value but also have significant economic value. This research does not only contribute to science, but also to the preservation of culture and the development of the creative economy in Indonesia.

Previous Literature

Research on the potential of artistic illumination from ancient Javanese manuscripts from the Keraton Hadiningrat from the 18th and 19th centuries and prototypes were made in the form of batik motifs produced by industrial partners in Yogyakarta. The prototype that was made began with research. Batik motifs based on ancient manuscripts are an idea that can support cultural preservation in Indonesia. To ensure the success of this research, a qualitative descriptive method was used, to understand the research subject comprehensively. The research results state that classical Javanese manuscript illuminations that contain historical and philosophical content can be used as batik motifs and implemented in the creative industry. The prototype of Batik motifs inspired by classical Javanese scripts are still rarely developed, presenting a good opportunity to implement them in the creative industry. This is considering that objects over 50 years old must be properly preserved without neglecting sustainability. (Pandanwangi, Himatul Alya, et al., 2023). Meanwhile, other researchers who focus on ancient manuscript research are Syarif, who researches the Illumination found in the Javanese alphabet. The object of his research is one of the aesthetic forms and is considered a special characteristic of a particular Javanese tradition. This causes almost all of the Javanese alphabet to be surrounded by illumination. According to Syarif, illumination has meaning from the historical or philosophical perspective of society at that time, such as: (1) beautifying the alphabet; (2) Illumination is a form of worship or good deeds; (3) having high, noble, and religious values. Artistic illumination in Javanese alphabets during the Islamic era is a special expression of Javanese society influenced by local wisdom. Javanese alphabets during the Islamic era, including their illumination, are a cultural heritage that can be classified as traditional literature and a depiction of Javanese culture at that time (Syarif, 2017). The two studies have different research objects with different methods. While both have near identical research topic. The research that will be conducted will examine image, both from the parts related to the characters played, composition, and colors used. The state of the art of this research is the visual translation of *Serat Menak Jayengrana* manuscript using visual language approach that can be identified through the structure of proportions, various appearances, distinctive appearances, arrangement of objects into a harmonious arrangement, and x-rays. Its novelty lays in the visual translation into a prototype of wastra art that

can be used in the creative industry. The purpose of this research is to reveal the aesthetic values of the images contained in the ancient Serat Menak Jayengrana manuscript, so that it can be used as an alternative in the development of a creative industry based on traditional art. The target of this research is to visually translate the images contained in Serat Menak Jayengrana into a prototype of a wastra art.

METHOD RESEARCH

The data of this research is taken from Reksa Pustaka Pura Mangkunegaran Ronggowarsito street, Keprabon, Banjarsari subdistrict, Surakarta City, Central Java 57131. This research is located in Solo, and it has a travel distance of + 8.5 hours from Bandung. Solo is chosen because this research is a continuation of previous research on the illumination of art from ancient manuscripts. In order for the research objectives to be achieved in accordance with the research design, an appropriate method is needed, namely a qualitative descriptive method using visual language theory and an algorithm-based digitalization method. The visual language used is a tool for reading images, images that can be identified, not abstract images (Tabrani, 2014).

The theory of visual language was chosen because in the first year, it will be used in analyzing the images in this ancient manuscript, through the wimba (picture) method, to explain how to describe the object, so that the visual narrative can be more communicative and understandable. The indicators of this approach are the proportion structure to find out the important figures (the important figure is larger than the other figures), various appearances (the visualized object is made to appear sideways), unique appearance (the object is visualized from the side and made from top to bottom), composition (the objects are arranged into a harmonious order), x-ray (the object visualized on the inside is seen from the outside). The measurable parameters can be applied to the product. Primadi emphasized that visual reading will refer to the concept of the structure of a figure, its composition, coloring, and its typical appearance (Tabrani, 2012).

The process of digitizing the wastra art in this study is by digitizing an image. This can be done by storing the image digitally, but because of its large size, the motif will need to be redrawn manually for replication purposes. If you want to use it again with a different scale, you need to redraw it. This process takes a lot of time and requires a large storage memory. To overcome this, in this research, the motif will be created using the turtle graphics algorithm, so that the stored motif image is small in size, and if used with a different scale can be done easily because the image results are in vector form. The steps for creating a motif with the turtle graphics algorithm are: 1) identifying the image's border or main lines that are the main motif; 2) set the turtle's movement according to the steps and angles of movement that can form a curve that matches the motif; 3) create a program according to the turtle's steps; 4) Run the program and see the results of the curve from the turtle's movement; 5) analyze the similarity of the image's curve and the turtle's curve; 6) fix the program if the results are different; 7) Repeat steps 1-6 for the next curve until the entire motif is finished. The stages in this study are.

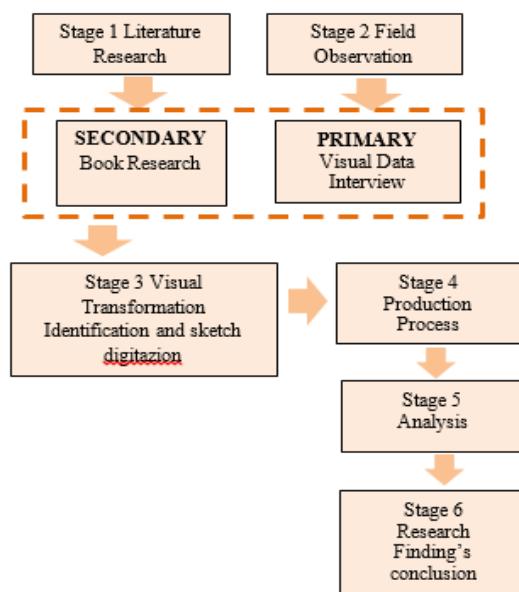


Figure 1. Research Stage.

Source: Team Researcher. 2024.

Based on the image above, the research was conducted through five stages. The first stage was conducting a literature study, data searching conducted by searching through reference books, journals, papers and the internet to support the information needed (Apin et al., 2023; Pandanwangi, Himatul Alya, et al., 2023); the second stage was observation in Pura Mangkunegaran Library in the form of images from ancient manuscripts containing Serat Menak Jayengrana and interviews with the informants who had been contacted previously to obtain data that could help this research. During the Observation, the researcher does data recording, and documentation (Darmayanti et al., 2023); the third stage was the process of transliterating from Javanese Pegon to Javanese and then translated into Indonesian. The goal is for researchers to be able to understand and interpret the existing text, its relationship to the image, and the past mindset described through the narrative. After completion, the data identification and execution of the data that will be used as an idea for creating wastra visual arts, as well as the digitization process will be done. The selected images will be grouped based on groups that have figures (humans, animals) that can represent and be implemented into wastra visual arts; In the fourth stage, the researcher created a prototype of the wastra visual art, the process began by making sketches, digitizing, transferring the visuals to A0 paper, and then creating two prototypes; the fifth stage are analyzing the data by selecting samples that were considered representative. The analysis was carried out by identifying the structure to find out the important figures (important figures were larger than other figures), various appearances (the visualized objects were made to look from its side), unique appearances (objects were visualized to look from the side and created from top to bottom), composition (arrangement of objects into harmonious order), x-rays (the objects visualized on the inside can be seen from the outside) and color. The sixth stage is Research findings and conclusions.

DISCUSSION: SERAT MENAK A HERITAGE OF LITERARY ARTS AND CULTURE

Serat Menak is one of the classical Javanese literary works that has high historical and cultural value. This work is an adaptation of the Persian epic story, Amir Hamzah, which was changed and adapted into the Javanese cultural context. Serat Menak tells the heroic story of Amir Hamzah, a prince from Arabia who was known for his courage and wisdom in fighting for justice and upholding the truth. Persia, as a great power for spreading Islam, had a major impact on the spread of Islamic culture, including ethical, aesthetical, and material aspects. This influence spread to India, Southeast Asia, including Indonesia. In Malay history, there are many records of superior rulers such as Khosru Anussyirwan. It turns out that the name also appears in Javanese literature as Nursewan in the Hikayat of Amir Hamzah. The Persian influence is clearly visible in the adaptation of this story, illustrating how elements of Persian culture blend and develop in the context of local culture, enriching literary traditions in various regions including Java (Ikram, 2007).

Serat Menak is one of the classical Javanese literary works that has high historical and cultural value. This work is an adaptation of the Persian epic story, Amir Hamzah, which was changed and adapted into the Javanese cultural context. Serat Menak tells the heroic story of Amir Hamzah, a prince from Arabia who was known for his courage and wisdom in fighting for justice and upholding the truth. This figure is referred to as Wong Menak in Serat Menak he also has another name, namely; Jayengrana. In addition, Jayengrana is known by various nicknames, such as Wong Agung Jayangresmi Menak, Wong Agung Jayengrana, and Wong Agung. Although he has various names, the most frequently used is Wong Agung Menak. Jayengrana's figure is depicted as a refined and handsome person, similar to the character of Arjuna in puppetry. Amir Hamzah, the central character in the Menak story, comes from Persian literature, especially in the book Qissa L'Emr Hamza in the era of Sultan Harun Ar-Rasyid In Malay literature (766-809 AD), this story is known as Hikayat Amir Hamzah, a transliteration by Ki Carik Narawita in 1717 which was later known as Serat Menak. This translation was carried out on the orders of Kangjeng Ratu Mas Balitar, wife of Susuhunan Pakubuwana I. Later, Serat Menak was rewritten by Rd. Ngabehi Yasadipura I and II of Kasunanan Surakarta into 48 volumes. In Yogyakarta, this work is known as Serat Menak Branta, written by Adi Triyono and Tukiyo on the orders of Gusti Kangjeng Ra Tusasi, daughter of Sultan Hamengkubuwono VI (Nur & Sumiati, 2018).

Jayengrana is a term derived from Old Javanese, consisting of three words: Jaya, Ing, and Rana. The word "Jaya" means to win, "Ing" means in, and "Rana" means war. By combining these three words, the overall meaning of Jayengrana is "to win in a war."

Jayengrana, as a character, reflects the concept of victory in the context of war or conflict. In ancient Javanese culture, this term not only refers to physical victory in battle but also to strategic success, leadership, and courage. This concept is often used in the context of kingship and leadership to describe the achievements and success of a leader or warrior in facing challenges and enemies. Jayengrana figures in the context of Javanese culture, underlines values such as courage, toughness, and strategic intelligence that are valued in that society. Victory in war is not only about the result, but also about how one faces and overcomes the various challenges

that are in front of them. Overall, Jayengrana is a term full of meaning, reflecting pride and achievement in the context of war and conflict, as well as respecting the strength and strategy required to achieve victory.

Serat Menak, as a classic work of hikayat in Malay literature, tells the story of Amir Hamzah, who is known as the uncle of the Prophet Muhammad SAW. This story originates from the Persian work, Syah Nameh. In this hikayat, Amir Hamzah is depicted as a heroic figure who fights to defend and protect Islam from the threats of its enemies. In Javanese literary narratives, Amir Hamzah is given various names and titles such as Wong Menak, Baginda Ambyah or Sang Menak Jayengdimurti. Although in Islamic history, the uncle of the Prophet Muhammad SAW is named Abu Thalib, in Serat Menak, the figure is identified as Amir Hamzah. This change raises the question of why the name of the real uncle of the Prophet Muhammad SAW, Abu Thalib, was replaced with Amir Hamzah. This can be explained through a literary and cultural approach, where the name Amir Hamzah may have been chosen to emphasize the heroic and mythological aspects of the narrative, as well as to adapt it to local traditions and the context of Malay culture. These changes illustrate how stories and characters from different cultures can be adapted and be integrated into local literary traditions (Qodri, 2018).

Serat Menak shows the skill of Javanese poets in adapting stories from abroad to suit the context and color of Javanese culture. This reflects the ability of Javanese authors to combine foreign elements with local wisdom, creating unique literary works rich in local cultural nuances (Rahmawan and Tiyasmala) Kristina (2021). In this study, the focus of the discussion is the story of Menak Lare written by R. Ng. Yasadipura I, a poet from Surakarta Palace. Story's Adaptations of foreign sources often involve adjustments to local values and culture to make it easily accepted by local community. This phenomenon also applies to Serat Menak in Javanese literature. When this story was adapted from its original source, which was an epic from Persia, into Javanese literature, adjustments were made to match the local pronunciation and style. The author also added local elements such as situations and locations known in Java, so that the story seemed like more like a local story that really happened.

In this way, the characters and events in the story seem to involve local people, even though in reality, the story may have come from a very different source. This process of adaptation not only makes the story more familiar and relevant to Javanese readers but also allows the values and spirit contained in the epic to be accepted and appreciated.

Serat Menak, for example, adapts stories from Persian epics to inspire and arouse the spirit of heroism among the Javanese people. The characters in these stories, such as Jayengrana, are often depicted as heroes who are brave on the battlefield and having a refined and polite attitude in everyday life. This adaptation creates an ideal hero for local readers, who does not only fight hard but also demonstrates moral values that are valued by the Javanese people. Adapting foreign stories into local traditions is a process that allows stories from other cultures to be accepted and appreciated in different cultural contexts, while still maintaining their relevance and inspirational power. This process is very important in enriching the local literary heritage. When a foreign story is adapted, new elements from the foreign culture are introduced into the local tradition, thus broadening the horizon and providing new perspectives to the readers and audience.

However, adaptation is not simply about introducing new elements. It also involves adapting the story to suit local values, norms, and cultural contexts. In this way, the foreign story can be more easily accepted and more relevant to local audiences. Adaptation often involves changing the setting, characters, or plot to make it more resonant with local experiences and expectations. For example, characters from the original story might be replaced with ones more familiar to local audiences, or the setting might be adapted to the local environment.

However, it is important to respect the cultural roots of the original story in the adaptation process. By preserving the essence of the adapted story, it is important to ensure that the inspiration and values contained in the story are not lost. Adaptations that are carried out with respect and understanding not only enrich local literature but also create cultural bridges that strengthen ties between different traditions and increase appreciation for cultural diversity.

Serat Menak Jayengrana, which comes from the Palace on the Island of Java

In obtaining valid data for this study, it starts with a literature study, then field data collection from Karaton Hadiningrat Ngayogyakarta. The informant of this research is Mr. Wiroguno, a courtier who has worked there for a long time. Based on his explanation, it was Sri Sultan Hamengku Buwono V who arranged the remaining literary works located in Karaton Ngayogyakarta Hadiningrat. He also had great attention to the development of art, especially in dance. One of them is wayang orang (wayang wong), which was popularized again during the reign of Sri Sultan Hamengku Buwono V. Furthermore, during the reign of Sri Sultan Hamengku Buwono VIII, major changes occurred in the education system in Keraton. This happened based on the principle he held, namely "wong sing kalingan suka, ilang prayitane", people who have felt pleasure will lose their vigilance, so like his father, he encouraged his sons and daughters to pursue formal education as high as possible, even if it means going to the Netherlands (Hadiningrat). During the reign of Sri Sultan Hamengku Buwono VIII, which began in

1921, *wayang wong* experienced its golden peak. Large-scale performances were often staged up to more than 20 plays in this era, and their glory continued until the reign of Sri Sultan Hamengku Buwono IX.

Golek Menak Classical Dance, which has the characteristic of Yogyakarta dance movements, was created by Him as one of the greatest legacies in the field of art. The Golek Menak, which is danced by humans in Sundanese culture, golek puppetry is an object made of buffalo skin or wood (Gallop, 2019; Santoso & Setyawan, 2019) that is carved to resemble a human, usually telling epic stories such as the Mahabharata, or stories from Serat Menak Jayengrana. Based on the British Library site, Serat Menak Amir Hamzah (Jayengrana) is written in Arabic-Persian (Pegon) on Daluang paper, bound in black ink with a cover made of genuine brown leather. On the cover of the envelope, there is an Islamic-style ornament. The front end of the binding board has a stamp with a ribbon with a frame and decorative ornaments at its corners and a medallion decoration in the middle of the wedhana (frame) (Gallop, 2019). The manuscript, copied in 1792, before being taken by British troops from the Yogyakarta Palace, is a version that has been customized with local content and developed with additional stories about the sons and grandchildren of Amir Hamzah. This manuscript was written for Ratu Ageng (around 1730-1803), who was the first wife of Sri Sultan Hamengku Buwono I and the mother of Sri Sultan Hamengku Buwono II.

The site's notes state that the Amir Hamzah (Jayengrana) manuscript was taken before 1812 by British troops. In line with Wiroguno's statement, on June 20, 1812, under the leadership of the British Lieutenant Governor, Thomas Stamford Raffles, the Yogyakarta Palace was occupied, and thousands of Javanese literary works were taken by the British. This event was nicknamed the Geger Sepehi War, because at that time the British and Indian (employed by the British) soldiers came from the Sepoy Brigade (Sulton et al., 2022).

Serat Menak Jayengrana, which is in the Ngayogyakarta Hadiningrat Palace, is the fourth volume composed by a Yasadipura poet around 1790 and is considered different from the manuscript used by the Balai Pustaka edition. This needs to be proven further based on historical data-logic criticism, and historical philosophy. However, it is necessary to consider the notes in previous research. Istanti wrote that literary culture in Indonesia during the period of the arrival of Islam on the island of Java found fertile ground, so that many developed into various works such as poetry, prose, and even performing arts. In the text of Amir Hamzah, there has been a shift in nuance that has followed the era and the thoughts of the copyist so that the results of his composition can be accepted by readers at that time (Istanti, 2010).

In an interview with Mr. Wiroguno, who revealed that the Wayang Golek Menak performance, which was danced by Keraton dancers at that time, used colors dominated by Green, Yellow, and a little Red. These colors certainly contain their own philosophy in the Keraton environment. However, because the Colored Film technology was just used in the Keraton environment during the reign of Sri Sultan Hamengku Buwono VIII, the documentation of the Sasak Wayang Golek performance was still in the form of black and white photographs.

Field data obtained from Karaton Hadiningrat Ngayogyakarta is an ancient manuscript accessed through a digital system, in the form of a description written using text in ancient Javanese. The latest regulation issued by the palace, anyone who comes cannot access the original manuscript, so the data is accessed via a monitor screen. Which is then translated into Indonesian by local library staff. The ancient manuscript Serat Menak Jayengrana is an ancient Javanese manuscript that does not contain visual elements in the form of illustrations or illuminations.

Further data was obtained from Puro Mangkunegaran Palace in Surakarta. Its distance from Yogyakarta is approximately 3 hours. The exact location is Reksa Pustoko Mangkunegaran, a special library owned by Pura Mangkunegaran. The location is inside the Palace. Its book collection consists of Javanese script books, some in the form of original or derivative manuscripts or in printed form. The general public can access this collection. For the collection needed for this study is placed in a special reference room. With the help of Mr. Bayun Marsiwi, the research team was able to observe, view, and document the images needed in this study. Some of the images obtained in the Serat Menak Jayengrana can be seen in Table 1.

Table 1. Jayengrana Visual Data.

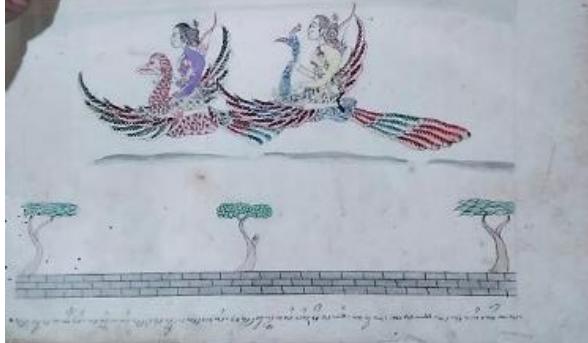
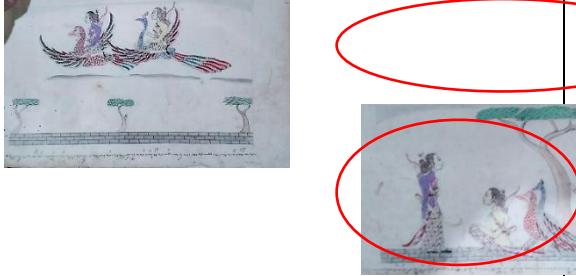
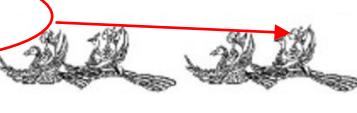
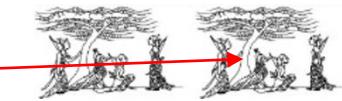
Jayengrana Visual Data		
		
Transliteration		

Dyah Sudarawerdi lan kang rayi Dyah Septupelaeli samya ngumbara nitib peksi garudha lan samamehi gegana	Sagunge Prajurit ing Kopar wadya Yunjana medal saking kitha Medayin, plepeg lir latu surak gumrah	Raja Surati Daham lan Raja Harmus prasami nitib liman nglurug dhateng Kelan ngirit gunging wadyabala.
Translation		
Dyah Sudarawerdi and his sister Dyah Septupelaeli are flying on a Garuda bird, exploring the sky	The large number of Kopar soldiers from Yunjana's army came out of the city of Medayin, visible from a distance like flames with loud cheers.	Raja Surati Daham and Raja Harmus rode elephants together to attack Kelan (land), accompanied by soldiers.

Visual Elements Implemented in Wastra Art Works

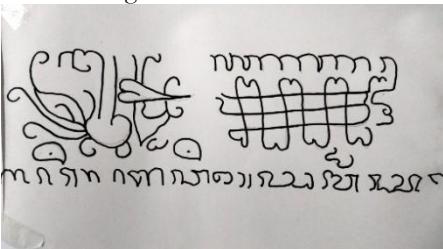
Below are the visual elements that explain the modifications of the illustrations that are used as the main idea in creating batik motifs (see Table 2, Table 3, Table 4.)

Table 2. Visual Elements in Wastra Art Works.

Illustrative images contained in Serat Menak Jayengrana		
Image		
Transliteration	Dyah Sudarawerdi lan kang rayi Dyah Septupelaeli samya ngumbara nitib peksi garudha lan samamehi gegana	
Translation	Dyah Sudarawerdi and his sister Dyah Septupelaeli flying on a Garuda bird exploring the sky	
Visual Elements Implemented in Wastra Artworks		
		
Digital Sketch of Jayengrana's Wastra Artworks		
		
Sketch of Dyah Sudarawerdi and her sister Dyah Septupelaeli riding a Garuda bird		

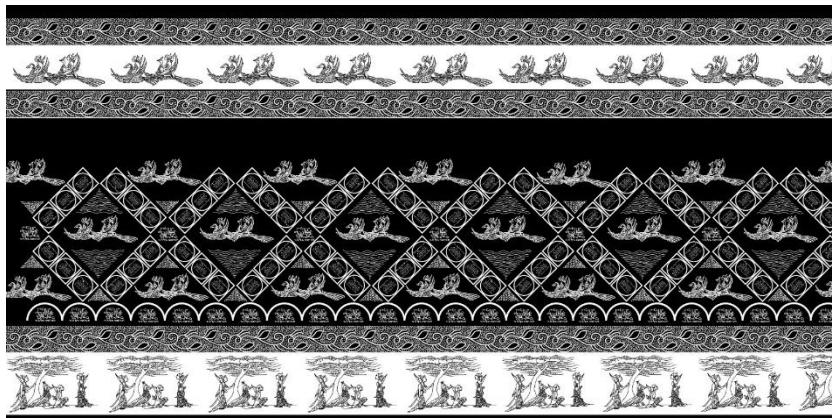


Sketch of Dyah Sudarawerdi and her sister Dyah Septupelaeli resting under a tree and Adaningga standing holding the tree on the right



Sketch of motif on the border of the manuscript

Jayengrane Wastra Artworks



In Table 2, the creation of this batik motif begins by making an outline sketch of the character Dyah Sudarawerdi and his sister Dyah Septupelaeli flying on a garuda bird. Both are depicted wearing kebaya cloth and carrying arrows, swords, and keris. The second picture is their sketch while resting under a tree, with two garuda birds in a sitting position. In this picture, there is another female character, Adaningga, in a standing position, touching the tree. This outline is simplified, reducing some details that would not be possible to create using the batik technique. After obtaining the image to visualize the contents of the story, the sketches were arranged following the storyline in the manuscript. The image of Dyah Sudarawerdi and Dyah Septupelaeli flying on a garuda is placed at the top of the field with a white background, then the middle of the cloth is colored black, to emphasize their process of flying from above to below. The middle part is filled with a line image of a square containing a circle and a border motif. This aims to tell about nature with its various contents such as trees, soil, and others seen from above. Isen-isen in the form of a collection of dots and lines are also made to describe the waters and mountains that the two women passed through on their journey. While at the bottom there is a picture that explains when they rested under a tree. There is a line filled with floral motifs to limit the upper, middle and lower areas. The color is in black and white to give a firm impression of confidence and decisiveness on the purpose.

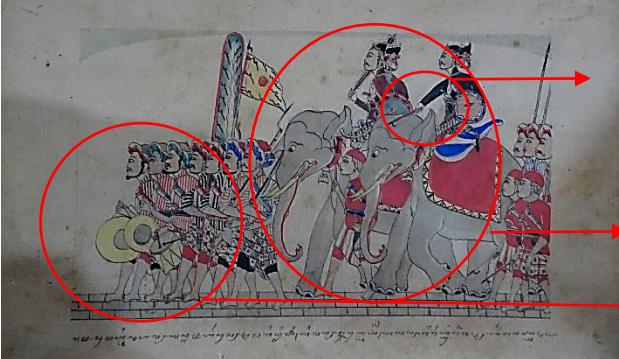
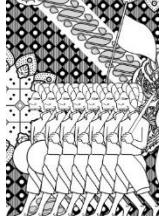
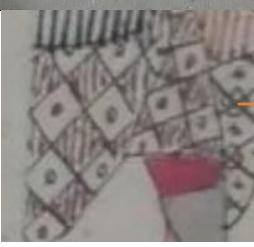
Table 3. Visual Elements in Wastra Artworks.

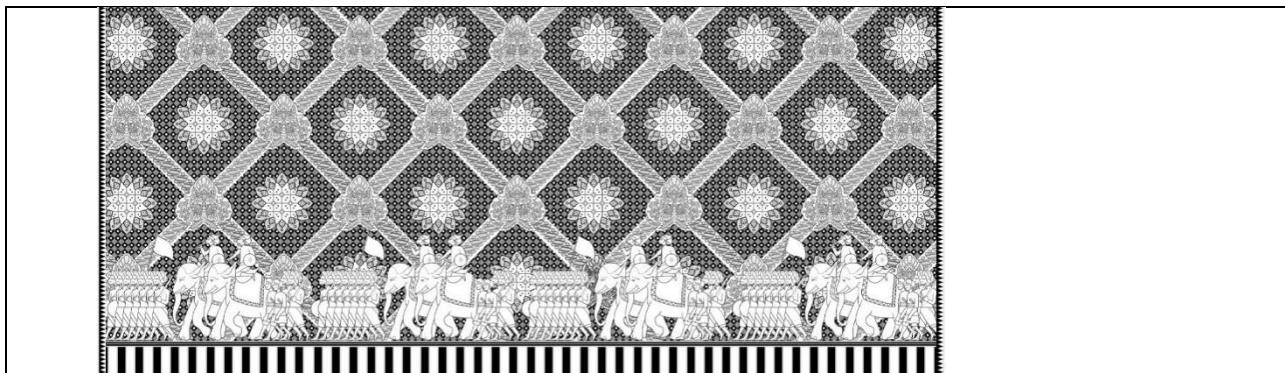
Illustrative images contained in Serat Menak Jayengrana

Image	
Transliteration	<i>Sagunge Prajurit ing Kopar wadya Yunjana medal saking kitha Medayin, plepeg lir latu surak gumrah</i>
Translation	The large number of Kopar soldiers from Yunjana's army came out of the city of Medayin, visible from a distance like flames with loud cheers.
Visual Elements Implemented in Wastra Artworks	
Digital Sketch of Jayengrana's Wastra Artworks	
Wastra Jayengrana	

In Table 3, the initial sketch is a take on the soldier motif from the original manuscript, then repeated twice, namely the repetition of the first 5 soldiers, one of whom is the trumpet bearer, gendering, and gong. The soldiers have new attire by wearing light blue beskap with round patterns grouped in every 4 pieces, then they also wear *jarik* and pants with a white striped lurik pattern on a blue background. The blangkon is colored red, the same as the color of the belt and the end of the knee-length pants. There are also some additions in the form of gray mountains, clouds and clusters of red flowers and green leaves that descend from above, with a yellow background.

Tabel 4. Visual Elements in Wastraw Artworks.

Illustrative images contained in Serat Menak Jayengrana		
Image		
		
Transliteration	<i>Raja Surati Daham lan Raja Harmus prasami nitib liman nglurug dhateng Kelan ngirit gunging wadyabala.</i>	
Translation	Raja Surati Daham and Raja Harmus rode elephants together to attack Kelan (land) accompanied by soldiers.	
Visual Elements Implemented in Wastraw Artworks		
		
		
Digital Sketch of Jayengrana's Wastraw Artworks		



Jayengrana Wastra Art with Motif of Rama Mother's Love



Table 4 explains that the creative process of creating the illustrations in the manuscript begins with the sketching stage, which consists of objects outlined in black. During the sketching process, the objects undergo several changes based on discussions and input from the research team, including aesthetic considerations regarding the visual object, composition, and color selection. The main visual object in the form of an elephant ridden by the King, a modification was made into an elephant motif made with an elephant animal outline. The accompanying soldiers were made into a sketch of the main motif that accompanies the king riding an elephant. This motif is to be standardized by lining it up horizontally and repeating it for the sake of composition and overall visual harmony.

The supporting motif is chosen from local wisdom in the form of a Parang motif arranged in a square. The supporting motif in the middle of the square is a modification of the shield held by the king. The next strategy is the design stage of the batik pattern repetition on the batik background, which is modified from the *jarik* cloth worn by the king's soldiers. The effect produced by this regular repeating pattern is an impression of authority, control, consistency, and gallantry. The reference for implementing the use of colors is derived from the colors of the manuscript illustrations: Black, gray, blue, and red. Black has a deep meaning of masculine strength, assertiveness, and courage. White, for the community, signifies cleanliness and brings tranquility to the wearer. Blue has a deep meaning of calm, gentleness, sincerity, and a perspective of loyalty. Red represents fierceness and passion.

Application of Manuscript Batik in Wastra Arts: Jayengrana

Batik

Batik is a work of art that stands the test of time and space (Dell'Era et al., 2020; Susantio, 2009). Therefore, batik, which began with the use of canting (hand-drawn pens) by Indonesian ancestors, is now richer in motifs, and its use is expanding, both from the perspective of clothing that can be worn by anyone and can be implemented in various products within the creative industry (Rasyidi & Bariyah, 2020; Saputra, 2024; Wibawanto et al., 2020). The aesthetic and functional values of the product are taken into consideration by the creators during the process of creating batik masterpieces, so that indirectly, in the process of preserving cultural heritage, many people are involved in efforts to continue to grow and strengthen the nation's identity.

Below is a digital product of an ancient Javanese manuscript that has been implemented into a wastra art with a Jayengrana motif.

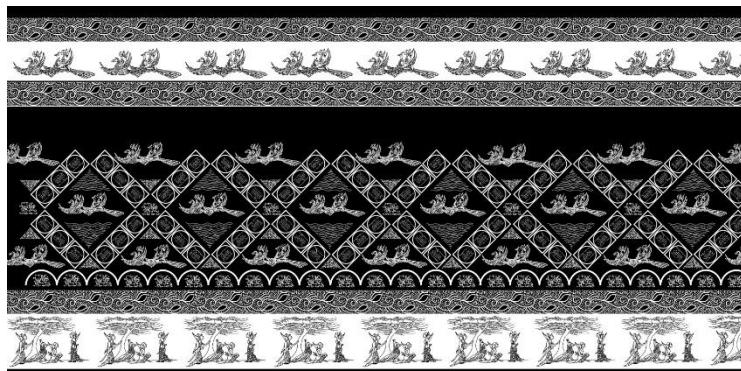


Figure 2. Jayengrana Batik with Mother Rama's Love Motif.

Source: Team researcher. 2024.

Figure 2 visualizes the figure of Dyah Sudarawerdi and her sister Dyah Septupelaeli flying on a garuda bird, exploring the sky, depicted by the 9 times repetition of the garuda motif and on 8 times repetition on her sister because the back is partially cut off. On the part of the garuda that the two princesses ride.

The white background on the upper part of the garuda is flanked by two white tendrils on the upper and lower parts, sandwiched into two equal rectangular sections. The white tendrils on a black background are filled with white dots, so that the background looks gray. As many as 31 leaves are black in color according to the background. The leaves are arranged in a row of 15, and 1 leaf is on the bottom right. The two tendrils on the upper and lower parts have a similar arrangement and shape; the leaves and tendrils balance each other to form a rhythm.

The two stories of the princess's journey are placed in two different parts. The first part is when they travel using the Garuda bird. This part is placed in the upper $\frac{1}{4}$ part of the figure, which is separated by a black line on the top edge. The second part is when the two princesses and the two Garuda birds are resting and are placed in the lower $\frac{1}{4}$ part of the figure.

This illustration is bordered by a black line on the bottom edge and white tendrils on a black background filled with white dots, forming a rectangle like the tendrils on the upper border of the figure. At the bottom, there are 8.5 repetitions of the two princesses and the two birds resting. In the last repetition, only one princess and 1 bird are cut off. The other half is the boundary between the story above and the story below, which is bordered by tendrils from the top and tendrils from the bottom, so there are three parts bordered by tendrils (the two upper and lower parts), which are illustrations of the story, and the middle part is a combination of the two. There are 6 pairs of birds in an equilateral box placed diagonally, so that they can form 6 repetitions of the letter X in the middle box.

The beginning of the letter X is partially cut off the and at the end of the letter X is also partially cut off, so that when the beginning and the end are put together, there will be 6 repetitions.

The end is closed with a repetition of 24 consecutively and curved to the side, a half circle in a horizontal position. The composition of this black and white cloth is very interesting, with the division of top and bottom, with its middle part a combination of both, such as the placement of the bird and the princess in the middle of a parallelogram, and the triangles above and below the princess are motifs taken from the bottom of the figure.



Figure 3. Batik Soldier Motif.

Source: Team researcher. 2024.

In figure 3, the work entitled *rampogan*, can be broadly divided into three categories, namely five soldiers on the left carrying drums, trumpets and gongs wearing light blue beskap clothes and blue lurik cloth with white stripes, followed by nine soldiers carrying spears and a cannon, there is a repetition of soldiers carrying drums, trumpets and gongs followed by a repetition of soldiers carrying spears and cannons, so there are two repetitions in this batik work.

Soldiers with a gray background to the mountain is the second part, namely, the addition of 8 clouds 3 times. The last part, or the third part, is the yellow part at the top; the flowers are repeated 10 times. It consists of 7 red flowers, the largest of which are in the gray area in a row to the side, and 6 green leaves that are repeated 10 times. This repetition is a balance in the composition, both a balance of color, such as the red color of the flowers spread on the blangkon, belt, and stripes on the knee-length trousers.

The green color on the leaves is also spread to the sash on the soldier's chest and under the drum. The ocher color on the stem is also spread on the cannon, trumpet, and keris. This distribution of colors is not only for balance but also for rhythm and unity. This distribution of colors here has been carefully calculated, such as in the middle of the blangkon, the large red flowers, the yellow face, and the yellow feet have a parallel composition and are being balanced by the dynamics of the blue and white lurik cloth, green scarf, and small flowers at the top with a yellow background. The entire composition is interrelated with each other, both in shape, color, and placement.



Figure 4. Liman Elephant Batik Motif.

Source: Team researcher. 2024.

Figure 4 visualizes the visual object implemented in Batik with a motif taken from the Jayengrana serat. The visualization is in the form of an illustration of King Surati Daham and King Harmus riding an elephant, accompanied by soldiers. It is placed on $\frac{1}{4}$ of the width of the cloth and along the base of the cloth, through four repetitions. The remaining $\frac{3}{4}$ of the width of the cloth is an equilateral square motif arranged diagonally.

The topmost arrangement consists of six squares to the side, in the 1st corner on the left and the 6th motif in the final corner on the right. The motif is cut, so that the side of the flower in the square box is cut by $\frac{1}{3}$.

In the second arrangement, there are five squares to the side, all parts of the equilateral square, and the flower in the middle appears intact, and the motifs on the corners are not cut. The third arrangement, which is the last arrangement, consists of six squares to the side, the same as the initial arrangement on the top, and is bordered by the motif of a king riding an elephant and accompanied by soldiers.

The composition of the boxes gives a geometric impression, and is not stiff, this is because the side of the box is decorated with a parang motif, and on each corner of the box is a motif that covers each corner. The white color of the parang motif looks very contrasting when compared to the dark gray background color. Red flowers with white outlines inside the box add rhythm to the upper area. The king, elephant, and soldiers at the bottom do not make the motif a point of interest, even though they are depicted geometrically, unlike the motif above, which gives a geometric impression. This is due to the use of colors that are not contrasting enough. The use of black and white striped motifs can balance the contrasting square motif above, but drown out the elephant motif below, even though there is the use of red on the flag, elephant saddle, and soldier pants. The covering motif on the left and right sides is a typical covering motif on batik cloth.

The figures contained in the three illustrations of the Jayengrana manuscript became the main idea in the creation of Jayengrana Batik, with the name of the motif taken from the story that was happening in the ancient Jayengrana manuscript. It makes the historical value strongly recorded in this batik, in addition to its aesthetic value. The colors used also came from the coloring contained in the illustration, except in table 3, the colors used were the local colors, namely yellow and green shades, because in the Puro Mangkunegaran Palace, these colors became the typical colors of the Mangkunegaran family.

CONCLUSION

Ancient manuscripts have historical value and aesthetic beauty, but unfortunately, they are often in a worrying condition. One of the contributing factors is the air conditions in Indonesia, which have high humidity, which damages the paper and fades the ink on the manuscript. *Serat Menak Jayengrana* has its own uniqueness in the form of a text narrative without having any visual form. The figures in the manuscript are not visualized with a side view like typical wayang characters, but in the form of text that has distinctive storytelling. Various studies have been conducted on this manuscript with a language and literature approach. However, the cross-disciplinary research that has been carried out has resulted in a broader integration of knowledge and perspectives from the perspective of arts, techniques, and textile crafts. Cross-academic collaboration is able to maintain the roots of local cultural wealth to create innovative products. Through wastra arts as a solution for downstreaming in the creative industry, it can give birth to the potential to drive the pace of the local industry and create new jobs. On the other hand, Wastra arts also contributes to science and the transition of cultural heritage to the younger generation, so that they can appreciate and love Indonesian culture as a national identity that can compete globally.

The research conducted on *Serat Menak Jayengrana* at the Puro Mangkunegaran Palace in Solo and the Ngayogyakarta Hadiningrat Palace in Yogyakarta aims to reveal the illumination aesthetic value that is wrapped in Javanese tradition through the visual language reading approach, becoming an alternative in the development of creative industries based on traditional arts. 6 stages begin with a literature study and are continued with the field observation and interviews to strengthen the data findings. The third stage is the process of translating the Javanese Pegon script into Javanese and then into Indonesian in order to understand the meaning and mindset of the past, which are described through the narrative. The fourth stage is the creation of a prototype of a wastra visual art through the sketching process and digitizing the sketch. In the fifth stage, the researcher analyzes the data through samples that have been created using the visual language approach, and the results of the analysis will lead to a prototype of a wastra visual arts.

The challenge begins in the third stage, where the transition from ancient script to Indonesian cuts some narratives that are only visible visually but have minimal text language. The *Jayengrana* manuscript obtained from the library of the Puro Mangkunegaran Palace in Solo comes from 1717, which is different from the one owned by the Ngayogyakarta Hadiningrat Palace in Yogyakarta. Both manuscripts contain the heroic story of Amir Hamzah, adapted from the Persian epic. However, the manuscript at Ngayogyakarta Hadiningrat Palace is in the form of digital texts. This is because the invasion of the British army led by Thomas Stamford Raffles during the Geger Sepehi War, which caused thousands of ancient manuscripts to be taken by the British. Meanwhile, the original manuscript stored in Puro Mangkunegaran Palace is in very worrying condition because the flood that happened in the past made the condition of the manuscript very fragile. However, the manuscript owned by Solo presents visual images accompanied by text in Old Javanese script. The language transfer process is only carried out on the text. The visual scenes in the script are not explained by the text, so the ability to analyze visuals using visual language is needed.

This process makes the creation of the wastra arts' prototype. Manual sketches are done by simplifying the form of the details that appear in the manuscript. Then the form is repeated and recomposed without reducing or violating the traditional rules of batik creation. The Combination of previously known motifs, such as the parang motif, which has a philosophical value as Javanese Kings form of respect to their ancestors, is presented as a form of acculturation of ancient and modern cultures depicted with flower motifs. The harmonization of ancient traditions that are respected with modern motifs with combination of bright colors, provides a new meaning that has high value.

The findings of this research show how rich the treasury of traditional Indonesian literary culture reflected through ancient manuscripts, one of which is *Serat Menak Jayengrana*. The results of ancient Javanese literary works are still spread out throughout Indonesia, so similar research is needed to maintain the sustainability of Indonesian culture that can compete globally in the creative economy market at an international level.

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Conflict of Interest

The author team has no personal relationships that could conflict with one another that might interfere with the work reported in this paper.

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