

Sarawak Pua Kumbu: Aesthetics Lies in The Eye of The Beholder

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Abstract: The beauty of Pua Kumbu is not merely a cultural expression but it also represents the wealth of information to pass from one generation to another. The art of creating Pua Kumbu design motifs is based on the body of knowledge gathered through collective memory, and the conservation of Pua Kumbu's knowledge and history. The aesthetic perception stimuli from the audiences are complicated cognitive processes. Hence, this study aims to measure the aesthetic perception of 400 participants on design motifs applied on the cloth according to their gender and background using ARS-Revised questionnaire. The findings revealed that female participants exhibited a greater knowledge of Pua Kumbu compared to their male counterparts. Participants from Sarawak perceived higher in cognitive stimulation, knowledge, and self-reference which indicated that they were more likely to be knowledgeable about Pua Kumbu. Participants from Sabah demonstrated the lowest in both cognitive stimulation and expertise despite Sabah being situated in the same region as Sarawak in Borneo. Gender and background of the participants are concluded to exert significant influence on the knowledge in Pua Kumbu design motifs. Knowledge of Pua Kumbu is crucial for the appreciation of aesthetics in preserving the culture and heritage of Sarawak, Malaysia at its best. The findings of this study may interest scholars and researchers in the unique Malaysian heritage.

Keywords: Aesthetic Perception, ARS instrument, Culture, Iban, Pua Kumbu. Survey

1. Introduction

There is a growing body of literature that suggests people are interrelated to owned customs and beliefs, which is compatible with Pua Kumbu and the Iban community. This textile is made by employing the woven weaving technique which uses cotton as the main component. In the past, the weavers were solely women. Thus, the design motifs selection was inspired by women and this made the design motifs sacred due to the fact that the weavers were seen as the chosen one, talented and gifted. It is believed that the humanoid figures or anthropomorphic (*engkaramba*) motifs could be merely weaved by chiefs' wives and daughters. In general work to date, the figure of *engkaramba* is the representation of deities of the Iban animistic belief. It also serves as a talisman to protect the wearer from danger as well as to ensure a bountiful harvest for the season. Besides the anthropomorphic motifs, some other motifs encompassed are the representations of animals, plants and Iban daily activities,

which are either complicated or simplified design motifs. The intangible cultural knowledge of Pua Kumbu is essential, not only for the Iban community but also to others, although it seems difficult to understand the hidden meaning without having the art knowledge on the particular subject.

We present an overview of literature related to the present work. The literature focused on the aesthetic or beauty, which is known as a part of the process of aesthetic perception. The word 'beauty' is defined and perceived differently, which was reported by a German psychologist; Delle Donne, that the perceptions gathered by perceivers can create a distinguished version of aesthetic perception. The existence of beauty does not 'just happen' as there is a cause behind it, which is not merely perceived. The education and culture where we grew up and the changing of time, also contribute to the way we observe beauty; - physical human beauty, or other traits, such as tanned skin or body weight. The beauty of a poem, a song or a painting is influenced by other elements of aesthetic in the objects and how the audience perceives and processes the data (Delle Donne, 2010).

Even though beauty is like an 'everyday' phenomenon to everyone, it is still difficult to define it. However, according to Haubrich, it is possible to explain the definition of beauty if we use a psychological theory. The concept of beauty is deliberately wide and extensive; it covers the sensational feeling of what we like, what we find fascinating, interesting, great, funny or inspiring (Haubrich, 1998). The pleasure feeling, either more or less intense, depends on how we perceive which is aroused by beautiful things around us (Delle Donne, 2010).

There is a relatively recent work in this direction by Schopenhauer, who described empirical perception as 'individual will' which can only be perceived within the inner sensations of the body, which are depending on the tangible or intangible forms, aims, or motives that one wants to achieve and, by having the correct perception, it can accomplish the mission (Vandenabeele, 2007). Schopenhauer's statement can be related to the claim that one's ultimate determination can change everything. It is the power of mind over body (Bibel, 2016). The feeling that arouses from inside is known as reception which is essentially a complicated cognitive process. Verbovsek and colleagues mentioned that the process of perception includes communication processes connecting the arts' consumers, creativity, artists, their artworks and more (Verbovsek, 2015). The aesthetic perception process involves many other essential factors such as cognitive stimulation, negative emotion, expertise, self-reference, artistic quality and positive attraction (Hager et al., 2012).

Aesthetic perception includes the values of the feeling of any visual arts (Bundgaard et al., 2017), which prompts interest when dealing with the arts either the feeling yields beauty, aesthetic interest, pleasure or any sort. The channel of feeling produced by the perception process can also be translated as appreciative judgment, appraisal, or numerous evaluations and are the basis for the beauty of the art appreciation process. An aesthetic perception arises in response to works of art or other visual arts (Hager et al., 2012). Experiences received from the surrounding and the environment could be pleasant or unpleasant, depending on the perceiver's perception. Moreover, a perceiver's perception can change based on the situation that he or she faces at that particular moment.

Before we proceed, it is crucial to briefly review the problems related to Pua Kumbu. The beauty of the intangible cultural heritage of Pua Kumbu is not merely a cultural expression but it represents the wealth of information and abilities to pass this information from one generation to another. Arai stated that the responsibility for protecting and transmitting the values and traditions of all cultures for the sake of future generations is not only one person's task, but it is a universal responsibility (Arai, 2004).

According to Jehom, most of researches related to Pua Kumbu were written in either personal or public blogs, and were seldom written and researched academically. This may be problematic and can cause difficulty in transmitting the art knowledge of Pua Kumbu because it is a tacit, verbally communicated knowledge that can only be learned by observation and demonstration (Jehom, 2015). In addition, the main concern is when the production of the Pua Kumbu design motifs were only based on the body of knowledge gathered through collective memory, the conservation of Pua Kumbu's knowledge and history shared subjectively among the community. Therefore, it is important to conduct this study for safeguarding the values and traditions of Sarawak Iban Pua Kumbu and to eliminate the knowledge barrier for the reference of future generations.

Literally, the perception of beauty is subjective. However, this study evaluates the aesthetic perception by using an established revised instrument namely as Art Reception Survey-Revised (ARS-Revised) (Wahed et al., 2019). This study's aim was to measure the aesthetic perception of the participants on design motifs applied to the Sarawak Iban Pua Kumbu, based on their genders and backgrounds by addressing the following research questions:

1. What are the aesthetic perceptions of the participants about the design motifs applied to Sarawak Iban Pua Kumbu?
2. What are the differences between gender and background of the participants on the five factors of aesthetic perception as measured by ARS-Revised?

2. Methods

The research design that the researcher decided to use was the quantitative descriptive survey research design, particularly a survey research (Ismail & Shafie, 2019). Aesthetic perception of the participants was measured to investigate the source of discrepancy using the Art Reception Survey-Revised (ARS-Revised) version, an improved version of the Art Reception Survey questionnaire by Hager and colleagues (Hager et al., 2012). ARS-Revised has a total of 21 items, measuring 5 factors which encompass cognitive stimulation, expertise, self-reference, artistic quality, and positive. The items were rated using a five-point Likert scale ranging from 1 to 5 (Strongly Disagree – Strongly Agree). The internal consistency of this questionnaire as indicated by the Cronbach's alpha value was reported high ($\alpha = .925$).

A self-administered questionnaire comprising two sections was distributed to 400 participants who were potential buyers of Pua Kumbu in the commercial market and visitors who visited Waterfront Kuching, Sarawak, Tun Jugah Foundation, Sarawak and Sarawak Textile Museum. Every visitor who visited these places had an equal chance to be selected as a participant. Thus, a simple random technique was employed and a total of 400 participants were involved. There were two criteria in the selection of participants which were above 18 years old and capable of understanding the Malay or the English language. These criteria are postulated to ensure that the participants could answer and respond to the survey accurately. The participants were instructed to respond regarding their level of agreement with the statements in the instrument and their participation was voluntary.

3. Data analysis

The data collected were analysed using the Statistical Package for Social Science (SPSS) version 25.0. The normality of the data was assessed with skewness and kurtosis (ranged between -2 and 2) (Joseph Jr et al., 2010). The data were presented in frequencies and percentages, mean, and standard deviation. Inferential statistics were carried out to measure art reception on the design motifs applied on Sarawak Pua Kumbu among participants based on their gender and background. An independent sample t-test was employed to analyse the differences between gender, while one-way analysis of variance (ANOVA) was used to compare the dependent variables between backgrounds. A post-hoc Tukey HSD test was performed to determine if there is a significant difference and the statistical significance was set at .05 ($p < .05$).

4. Results

4.1 Socio-demographic characteristics of participants

A total of N=400 participants have completed the survey. The participants consisted of 178 (44.5%) males and 222 (55.5%) females. They aged between 18 to 21 years old (31.3%), 26 to 30 years old (19.8%) and 31 to 35 years old (14%). Others aged from 36 to 40 years old (12.3%) and 41 years old and older (22.8%) (Table 1). The majority of participants (78.8%) were from Sarawak, and some were from Peninsular Malaysia (12%), Sabah (4.8%) and foreign (4.5%). In relation to the participants' education background, most of them had at least SPM, an O level in Malaysia context (34.5%),

Diploma (23.8%) and Bachelor's degree (11.8%). Few had certificates (8.8%) in Master's degrees (3%) and PhD (1.3%). Others were having diplomas and only school certificates. Most of the participants had monthly income from less than Ringgit Malaysia RM1000 to RM3000 (82%), and few were RM3001 and above (18%).

Table 1. Socio-demographic characteristics of participants

Variable		<i>N</i>	%
Gender	Male	178	44.5
	Female	222	55.5
Age (years)	18 to 25	125	31.3
	26 to 30	79	19.8
	31 to 35	56	14.0
	36 to 40	49	12.3
	> 41	91	22.8
Background	Sarawak	315	78.8
	Sabah	19	4.8
	Peninsular Malaysia	48	12.0
	Foreign	18	4.5
Education level	SPM (O level)	138	34.5
	Certificate	35	8.8
	Diploma	95	23.8
	Bachelor's degree	47	11.8
	Master's degree	12	3.0
	PhD degree	5	1.3
	Others	68	17.0
Monthly income (RM)	< 1000	102	25.5
	1001 – 2000	146	36.5
	2001 – 3000	80	20.0
	3001 – 4000	28	7.0
	> 4001	44	11.0

4.2 Comparison of the ARS five factors with participants' gender and backgrounds

Table 2 presents the ARS five factors by participants' gender and backgrounds. In overall score, Positive Attraction was scored the highest (4.27 ± 0.74), and lowest was Expertise (3.19 ± 1.06). In measuring the differences of the five factors between gender, only Expertise was found significantly different ($p < .05$); where male = 3.12 ± 1.01 , female = 3.37 ± 1.08 , $p = .018$. Other four factors were found not significant ($p > .05$).

Among the participants' backgrounds, Cognitive Stimulation, Self-Reference and Expertise were found significantly different ($p < .05$). Post-hoc Tukey was further performed, where there was a significant difference in Cognitive Stimulation between the Sarawak and Sabah participants, as well as Sabah and Peninsular Malaysia. On the other hand, the participants from Sarawak and Peninsular Malaysia, Sarawak and Sabah and as well as Sabah and Peninsular Malaysia were significantly different in Self-Reference and Expertise.

The backgrounds of the Sarawak participants perceived the highest scores in those three variables. Those visitors from Sabah perceived the lowest in Cognitive Stimulation, while those from Peninsular Malaysia perceived the lowest in both Self-Reference and Expertise. Meanwhile for the other factors, Artistic Quality and Positive Attraction, the means scores were similar in distribution, among the participants from different backgrounds ($p > .05$).

Table 2. Comparison of ARS five factors by gender and background (N=400)

	CS	SR	AQ	PA	Exp
Overall	4.06 ± 0.75	3.26 ± 1.08	4.23 ± 0.75	4.27 ± 0.74	3.26 ± 1.06
Gender					
Male	3.98 ± 0.79	3.15 ± 1.04	4.16 ± 0.70	4.19 ± 0.75	3.12 ± 1.01
Female	4.11 ± 0.72	3.35 ± 1.10	4.29 ± 0.77	4.33 ± 0.73	3.37 ± 1.08
<i>p</i> -value	.090	.065	.077	.072	.018*
Background					
Sarawak	4.12 ± 0.73 [¥]	3.44 ± 1.05 ^{¥€}	4.27 ± 0.72	4.30 ± 0.73	3.43 ± 1.01 [¥]
Sabah	3.42 ± 0.82 ^{¥€}	3.07 ± 0.77 ^{€£}	4.04 ± 0.72	4.18 ± 0.69	2.61 ± 0.89 ^{¥€}
Peninsular M.	3.96 ± 0.61 [€]	2.23 ± 0.65 ^{¥€£}	4.16 ± 0.77	4.18 ± 0.62	2.43 ± 0.92 ^{¥€£}
Others	3.78 ± 1.07	3.10 ± 1.10	4.00 ± 1.10	4.09 ± 1.19	3.19 ± 1.12 [£]
<i>p</i> -value	.001*	.001*	.229	.515	.001*

*significant difference at .05 ($p < .05$),

¥, €, £ significant difference at .05 between two groups for Post-hoc Tukey HSD test (one-way ANOVA)

CS=Cognitive Stimulation, SR=Self-Reference, AQ=Artistic Quality, PA=Positive Attraction, Exp=Expertise

5. Discussion

Obviously, visual arts affect humans differently, and only great art consists of both beauty and alluring content (Else et al., 2015). No one can claim that his or her preferences of arts are better than others because preferences depend on the beholder. In order to achieve the objectives of the study, the following discussion was elaborated based on the research questions.

Question 1: *What are the aesthetic perceptions of the participants about the design motifs applied to Sarawak Iban Pua Kumbu?*

Aesthetic perception is a complicated relationship between visual stimuli and individual understanding which is linked to generating opinions, either positive or vice versa, depending on the visual complexity (Xenakis & Arnellos, 2014). Aesthetics can be categorised into two groups. The first group is an individual's sensible qualities toward an object and the second group is that the feeling arose can either be pleasant or unpleasant which involves aesthetic perception and reflective movement (Harries, 2009; Kant, 1987). It is suggested that 'reflective' refers to one's personal experience when dealing with the visual object (Harries, 2009).

Participants perceived the highest in a positive attraction which indicated that Pua Kumbu does attract an audience. This is reasonable with the unique design of this cultural art, which was exhibited or sold in the targeted areas. However, the participants revealed mixed feelings when they were asked in an open-ended manner on their feelings regarding Pua Kumbu. The question asked was, "*What do you feel about the Pua Kumbu?*". To some of them, this textile was appealing and beautiful due to the colour and the uniqueness of the design motifs applied. Furthermore, not to mention their excitement of being able to purchase the Pua Kumbu. However, several participants did not want to touch the textile, as they were fearful of something they were not aware of. They perceived that the design motifs applied on the Pua Kumbu were frightening and unpleasant. This finding was interesting because, despite the fact that the participants were attracted to Pua Kumbu, they had personal judgement towards it, which they might perceive as a spiritual material (Magiman et al., 2018). It can be debated that human feelings are subjective to personal feelings toward the object which include their past experience and knowledge acquisition. The cognitive dynamic of human beings is generated by seeing beautiful and valuable objects that are capable of implanting aesthetic values. Beauty is not from the property of an object but is gathered from the feelings created by multiple cognitive areas which are known as '*imagination and reason*' (Kant, 1987). The pleasant or unpleasant feeling produced relies on how the sensory processes the information (Kant, 2000).

The expertise factor has demonstrated the least agreement among the participants. This could be explained by the lack of knowledge among the participants, especially on the making of Pua Kumbu,

in terms of its weaving, technique, and the history. This is supported by a study on painting artwork (Pietras & Czernecka, 2018), where those with prior knowledge on artwork would influence their aesthetic perception. Aesthetic perception is a function of the perceiver's processing dynamics: the more fluent the perceiver processes an image, the more positive their aesthetic response will be (Sun et al., 2014). Therefore, it can be expected that fluency of the perceiver (participants) in processing the information regarding Pua Kumbu depends on the perceivers' art knowledge (Hager et al., 2012). The interrelation between knowledge and perception significantly impacts the perceiver aesthetic interest, in a way, where it could either develop a positive or the negative aesthetic perception.

Question 2: What are the differences between gender and background of the participants and five factors of aesthetic perception as measured by ARS-Revised?

In relation to Question number two as described above, the findings showed that gender influences aesthetic perception on skill or knowledge in Pua Kumbu as addressed in this study, the expertise factor. The female participants exhibited a higher knowledge of Pua Kumbu compared to the male participants. The present finding of this study was supported by Bloomfield (2015) which stipulated that gender plays an important role in aesthetic perception. Female participants were more likely to have art knowledge or possess some skills in handcraft, sewing or weaving. Thus, they have more detailed perceptions toward the art of the design motifs on Pua Kumbu than their male counterparts. Furthermore, female participants who possess knowledge on the Pua Kumbu, are presumably interested in the details of the textile production, situating the socio-cultural context of their interpretation (Housen, 2001).

The background of the participants had influenced their cognitive stimulation, skill or knowledge, and self-reference in the design motifs of Pua Kumbu. Those who were from Sarawak perceived higher in these three variables which indicated that they were more likely to have some art knowledge and could link information about Pua Kumbu to their personal experience. This is relevant since the Sarawakians are the ones who have produced this cloth, and it is very significant among them. Previous studies had supported that for those with art knowledge, their aesthetic perception is related to knowledgeable connoisseurship (Meecham & Sheldon, 2005; Scruton, 2011), although beauty appraisal is not solely about beauty. Nevertheless, for other scholars, beauty is described as the understanding of the 'underlying process' of the aesthetic perception (Kirk et al., 2009; Leder & Nadal, 2014). The underlying process of the aesthetics perception is interrelated with science where the process is defined as '*neuroaesthetics*' (Cela-Conde et al., 2011; Chatterjee, 2003, 2014; Cupchik et al., 2009; Leder et al., 2004; Skov et al., 2018).

On the other hand, participants from Sabah revealed the lowest perception in both cognitive stimulation and expertise. This is an interesting finding since Sabah is situated in the same region as Sarawak; Borneo. They depicted that their knowledge or skill in the field of Pua Kumbu design motif was insufficient. The design motifs of Pua Kumbu were found to be 'not well' understood by the young Iban generation (Magiman, 2012; Magiman et al., 2018). Thus, it is acceptable if the Sabah participants were not well-informed about Pua Kumbu, specifically the design motifs. Naïve perceivers would concentrate more on what is depicted rather than how the design motif on Pua Kumbu was done; it comes as no surprise that they were positively attracted to this textile. This is supported by Leder et al. (2006), where those with no art exposure would appreciate the abstract art when there was information about the piece is given to guide their interpretation (Leder et al., 2004). The participants who were categorised as 'others' were from other countries, which were mostly European countries and Australia. In comparing the skill or knowledge, they revealed a significant greater mean score than those from Peninsular Malaysia. Tourists, who came to visit Kuching, Sarawak were exposed to some knowledge or information on the tangible and intangible culture of the state. The reason they travelled to the state was because of the culture and prior information on the interesting attractions; culture and history. Thus, they were more likely to exhibit greater knowledge of Pua Kumbu. Meanwhile, Peninsular Malaysia's participants showed the lowest self-reference. Self-reference refers to one's tendency to remember information when the information has been linked to him or her (Hager et al., 2012). In this study, these participants were less likely to relate themselves to the design motifs of Pua Kumbu. This can be attributed to the fact that Peninsular Malaysia is located in another region of Malaysia. They also

practise different cultures compared to those from Sabah and Sarawak, which justified the least relation of self-reference to the design motifs of Pua Kumbu.

6. Implication to education

The intangible cultural heritage was acknowledged as the main source of cultural diversity, with its primordial idea was to safeguard cultural diversity globally (Aikawa, 2004), and sculpting the way towards the Fourth Industrial Revolution (Bandelli, 2018). The integration of art and technology is building a pathway of bridging the gap of the cultural heritage to more current and dynamical approaches.

In this study, the intangible cultural heritage of Sarawak Iban Pua Kumbu is the primary focus, thus it is crucial to safeguard the art knowledge on the subject matter so that the appreciation on the aesthetic would be in 'good hand'. According to Adendorff et al. (2018), the 21st century was marked by the expansion of information and knowledge-based economies. Therefore, the implementation of Cultural and Creative Industries (CCIs) in the Fourth Industrial Revolution can decrease the skills gap, promoting social inclusion, cultural diversity and human development (Adendorff, 2018).

It is revealed that those with exposure to the art would have a greater perception of aesthetics on Pua Kumbu. Knowledge of Pua Kumbu should be shared with the younger generations so that the appreciation towards this textile would not disappear with time. It is believed, by exposing the art knowledge with digitalized and technological approach, its blurring the gap of Pua Kumbu and the art knowledge. In the current trends, it is exposed that the digital technology approach is taking place with the integration of the arts into education in Science, Technology, Engineering and Maths (STEM) (Bandelli, 2018) and more innovative educations for the effective learning environment (Ho, 2020).

As stated in UNESCO Human Development Report 2004, "cultural diversity has its own value as it enhances consumer choice and enriches cultural experience" (UNESCO, 2004). This statement highlights that even we are imminently heading towards the modernized world, but our roots in the intangible culture and heritage are what we carry together towards the end. It was believed the intangible cultural heritage was an important element in defining and forming people's identities and communities, which led to the major key of contributing to the globalization processes (D'orville, 2004), as humanity became the central element of safeguarding the cultural heritage (Wulff, 2004). Thus the effective way of preserving this heritage is required as to ensure the culture will last and be accepted globally.

In addition, it is recommended that the textile industry should strive to deliver art knowledge on the design motif, apart from producing Pua Kumbu. Its hidden meaning should be disclosed and shared, so that this art piece would be more appreciated, especially among non-Sarawakians. Future studies should explore more on the aesthetic perception in a qualitative manner, especially the weavers who are directly involved in the making of Pua Kumbu. Parallel to the 2020 innovative thinking or 'creativity capital', this will become the third major skill needed to survive and succeed in the Fourth Industrial Revolution (Adendorff, 2018). This effort would further contribute to art knowledge, which is an important highlight of this study.

7. Conclusion

In conclusion, the research questions were answered exclusively based on the results and findings of the study. The aesthetic perceptions were received in a similar fashion based on gender, except for the expertise, which is related to skill or knowledge on the subject matter. Females, who exhibited more interest in creative art, observed a greater expertise perception on the Pua Kumbu design motifs. The male aggressiveness and the female femininity in nature (Bloomfield, 2015) have influenced this finding. In other words, the judgments and views of aesthetics lies in the eyes of the beholders. It is suggested that between male and female participants were affirmatively dissimilar in those skills or knowledge. On the other hand, those who were from Sarawak revealed the highest scores in cognitive stimulation, self-reference, and expertise on the Pua Kumbu design motifs, with artistic quality and positive attractive observing a similar distribution regardless of the perceivers' background.

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Appendix A

Art Reception Survey - Revised (ARS- Revised) instrument (Wahed et al., 2019)

Using the ratings scales provided, indicate how much you agree with each of these assessments of the Pua Kumbu (1 = strongly disagree; 5 = strongly agree)

1. Cognitive Stimulation

It is exciting to think about this Sarawak Pua Kumbu.

I would like to learn more about the background of this Sarawak Pua Kumbu.

It is fun to deal with this Sarawak Pua Kumbu.

This Sarawak Pua Kumbu. is thought-provoking.

This Sarawak Pua Kumbu makes me curious.

2. Expertise

I can relate this Sarawak Pua Kumbu to its art historical context.

I know this Sarawak Pua Kumbu.

I have an idea what the weaver is trying to convey in this Sarawak Pua Kumbu.

I can relate this Sarawak Pua Kumbu to a particular weaver.

3. Self-reference

This Sarawak Pua Kumbu mirrors my own personal emotional state.

I can associate this Sarawak Pua Kumbu with my own personal biography.

Personal memories of mine are linked to this Sarawak Pua Kumbu.

This Sarawak Pua Kumbu. makes me think about my own life history.

4. Artistic quality

The composition of the Sarawak Pua Kumbu is of high quality.

The Sarawak Pua Kumbu is very innovative.

The Sarawak Pua Kumbu. features a high level of creativity.

The weaver's manner of creating Sarawak Pua Kumbu is fascinating.

5. Positive attraction

This Sarawak Pua Kumbu is beautiful.

This Sarawak Pua Kumbu is pleasant.

This Sarawak Pua Kumbu thrills me.

I feel inspired by this Sarawak Pua Kumbu.