

## Construction of Meaning from Traditional Cultural Dance Elements in Furniture Design

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### Abstract

This study aims to find out how designers create meaning during the design development stage. This study explores 14 dance notations and steps and how they can be used in furniture design to create shape and meaning. It looks at how to use these movements in the design of furniture. In this work, semiotics is used to talk about how "sign," "object," and "interpretant" work together. As a result, several prototypes are designed, built, and tested to figure out the final design's shape and purpose. It can be concluded that using parts of traditional cultural dance helps create meaning and value in the context of furniture design projects.

Keywords: design process; meaning-making; furniture design; semiotics

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### 1.0 Introduction

Design is a challenging concept to explain since it can be viewed from a variety of angles and can be understood in a wide variety of ways, but the actual process of designing anything is quite simple and widespread. Every single one of us is capable of, and in fact does, design (Cross, 2011; Ali, & Liem, 2015). In point of fact, people are designing things regardless of whether or not they are experts in the field and whether they want to. The relationship between design and culture and the relationship between design and globalisation are two topics that have received a lot of attention during the past 20 years (Goldschmidt, and Rodgers, 2013; Isa, and Andre, 2014). Even if there are many of these studies and they are diverse, the association still requires further explanation and thorough investigation, especially if it is approached in a novel way from a unique viewpoint.

Furniture is designed and manufactured to let people sit and rest, work and play, arrange or exhibit goods, and partition space. This point of view proposes a broad utilitarian framework in which function is viewed as the primary intended purpose of the furniture. Furniture design was becoming an important aspect of the home and working environment and most mass-produced chairs, in particular, show little regard for ergonomics (Kelly, 2005; Saul, 2010; ÖDEN, 2020). Seating design focuses on how it is split into a stool, taking into account the need for elevation. Changes in these three aspects might have a pleasing or displeasing effect, depending on the intended function of the design (Carstensdottir et al. 2011). Numerous studies have been conducted over the years to investigate seating design. However,

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specialised studies on seating design based on human movements and behaviours are lacking (Frleigh, 2004; Isa, et al.2020). As a result, this study aims to discover how to employ human movements and behaviours in constructing seating design.

Many studies and works on culture are being conducted in the Western world. However, their product and cultural ideas are less applicable to the Malaysian context. As a result, a product and culture study should be conducted in order to construct a theory of product and culture that can be further developed to boost creative and cultural industries in Malaysia, particularly the furniture business. Due to a lack of sources for further research and the researcher's inability to gather detailed furniture design from other literature and designers in Malaysia, as well as a lack of information on seating design and implementation in relation to culture, this study will only focus on the context relationship between "sign," "object," and "interpretant."

It is highly crucial for the design of a piece of furniture to accurately depict the national identity of a country. The incorporation of a Malaysian culture dance into furniture design has the potential to bring about many benefits, particularly in light of the rapidly evolving technological landscape that can be found in contemporary global markets. The designers of furniture must have been highly competitive in order to produce items that are more inventive and have a distinct Malaysian DNA that is attractive in design and value. The goal of this work is to explore how designers translate Malaysian cultural dances, with a focus on 14 dance movements, into chair design, with the following key objectives:

- (i) To develop a seating behaviour based on cultural dance movements
- (ii) To investigate the influences of dance and culture on the development of furniture; and how they may be used in practical design

## 2.0 Methodology

This study began with the participation of 14 novice designers who volunteered to take part in the design process over the course of fourteen weeks. The topic of the design process was "Airport Lounge Seating: Inspired by Malaysian Culture Dance DNA." The designers had complete discretion over which traditional dance styles they wished to draw inspiration from while formulating new ideas. The airport furniture was chosen for this research because the National Airport is known as the "Gateway to the World." Because of this, the designer will have the opportunity to create something that honours Malaysia's culture while also presenting the country to the rest of the world. In this way, we posit that Malaysia's culture and heritage will continue to be preserved and at the same time, Malaysia's identity will be made abundantly clear through the designs of products that are invented, manufactured, and marketed across the world. This project is an attempt to paint a picture of the possibilities for the triangle interactions that might take place between Malaysian designers, local materials, and Malaysian customers in the process of developing a Malaysian design identity.

Because the goal of the research is to include components of the cultural dance into the design of seating, semiotics has been found to be helpful in order to interpret the dance's movement as a sign. Both Hjelm (2002) and Hu et al (2019) pointed out that the study of semiotics can help us become more aware of reality as a creation and the roles played by ourselves in constructing or designing it. Additionally, the study of semiotics provides the theoretical framework for art and design. Charles Sanders Peirce, the American who is considered to be the father of semiotics, claimed that there was a triangle link between "sign," "object," and "interpretant." The actual object that is being looked at is the sign. The "object" is the thing that the sign is referring to, and the "interpretant" is the individual's understanding of what the sign is trying to convey. The field of semiotics examines three distinct modes by which signs convey meaning to recipients. These include:

- (i) Denotation refers to the object's literal reading, which involves recognition of the item and literally reminds us how it ought to be utilised. It also includes the reading of the literal meaning of the word.
- (ii) Connotation is the associative meaning of an object, including its form, material, construction, colour, and texture. This meaning is derived from the object's form.
- (iii) The Myth refers to the beliefs that are associated with the thing; these can include the stories that surround the object's genesis, the people who may have had it or others like it, and the purposes for which it was utilised. (Hu et al, 2019; Ventura & Shvo, 2016; Umetani et al. 2012)

## 3.0 Results and discussions

Since this research is to create a seating design based on cultural dances, the stages involved in the design process are shown in figure X. As a result of these research endeavours, a number of criteria for seating models have been defined. In the concept stage, sketches, models, and already existing relevant furniture studies are utilized, in addition to a number of criteria questions that were established during the research process and led to potential avenues for the study direction (Goldschmidt, & Rodgers, 2013). During the design phase, a product is given a physical shape, which includes how it will seem, how it will be built, what it will be made of, how it will work, and how it will interact with users (Hyland, 2010 & Bing et al. 2011). Several different seating prototypes are created after an analysis of the relevant research and literature, as well as an investigation into the components of related cultural dances. During the development process, the proposed designs have been prototyped in scale for designers to evaluate the form, structure texture, colour and functionality in the context of the final design. It is intended to present several ideas on how the parts of cultural dances element can be reimagined as a seating design in a variety of settings.

### 3.1 Participant's selection of culture dance for design inspiration






Table 1 provides an overview of the traditional dances that were considered for inclusion in the project. The participants have come to an agreement that they will not choose dances that are too similar to one another in order to prevent redundancy and uncertainty in this design work. They are all in agreement that they would like to have multiple variations of exploration during the design process, and they are interested in observing the variety of outcomes that may be achieved by making distinct individual selections.










Table 1. Malaysia Traditional Ethnic Dance Chosen by The Novice Designers











Designer	Malaysia Traditional Ethnic Dance
1	Puteri Asyik (Asyik Dance)
2	Joget Pahang (Pahang Dance)
3	Tarian Ceracap Inai (Ceracap Inai Dance)
4	Mongigol Sumayau (Mongigol Sumayau Dance)
5	Tarian Piring (Piring Dance)
6	Joget (Joget Dance)
7	Joget Mak Inang (Mak Inang Dance)
8	Tarian Gamelan (Gamelan Dance)
9	Tarian Igal-Igal (Igal-Igal Dance)
10	Tarian Ngajat (Ngajat Dance)
11	Tarian Ulek Mayang ( Ulek Mayang Dance)
12	Tarian Daling-Daling (Daling-Daling Dance)
13	Tarian Menora (Menora Dance)
14	Tarian Magunatip (Magunatip Dance)





Table 2 is a representation of the semiotic analysis that the participants made for developing their furniture design. The primary emphasis of the work was to determine the triangle link between "sign," "object," and "interpretant" in meaning construction in developing the design. From the results depicted in Table 2, it can be concluded that the bulk of the participants come up with their furniture designs using ornamental patterns. The ornamental patterns that are carved into these pieces of furniture not only serve the purpose of decorating the furniture, but they may also become a symbolic instrument for individuals to transmit the decorative motifs that are employed and also can be used as a symbol by individuals to convey their own meanings.

Table 2. Semiotics analysis by the designers

Designer	Selection of Culture Dance	Final Lounge Chair Design	Semiotics analysis		Construction Meaning
Designer 1	 Asyik Dance		sign	The posture of the sitting movement	Comfort seating
			object	design construction from the headgear, flower motifs	bright and attractive colour, detailing on the arm line
			interpretant	The dance's rhythms are meant to lift Ratu Kuning's spirits after she was saddened by the death of her pet bird.	Kneeling and sitting in a kind and polite way
Designer 2	 Joget Pahang Dance		sign	Traditional couple dance with a smooth hand and body movements.	Flowing dance with a partner
			object	The scarf used by females has a geometric pattern, but the sampin worn by men has floral motifs.	Geometric motifs and flowers simplified into the geometric form used as a design for Malay traditional cloth
			interpretant	a wandering merchant from one state to another state	To create something that comforts travellers
Designer 3			sign	Posture for the kneel sit character	Flowing couple's dance.
			object	decorations such as 'Golden Flowers' and lit candles that give meaning to the rays of happiness	The golden flower looks like Bunga Cempaka, a flower that has a place in Malay culture and literature.

			interpretant	as elements of 'worship duli' (worship/forgiveness)	The lounge chair encourages you to maintain a positive and kind demeanour, as is customary in Malay society.
Designer 4			sign	curved, lavish, refined, refined aesthetics, and classic	curving, luxurious, sophisticated, aesthetics that are refined, and classic
			object	Colours of gold, crimson, and black provide the impression of a unique and gigantic design with complicated geometry, sharp corners, and a zigzag pattern.	Gold, red, and black create the appearance of a massive design with intricate geometry, sharp angles, and a zigzag pattern.
			interpretant	The dancers raise their arms slowly and softly, focusing on the action itself as they do so, like an eagle soaring through the air.	The lounge chair helps you keep a friendly and pleasant attitude while giving the impression of a big, complicated design with sharp corners and a zigzag pattern.
Designer 5			sign	a variety of shapes, as well as quick movements	The numerous layers of the backrest are reminiscent of the multiple movements.
			object	Flower themes, headwear, and customs	colourful backrest with floral designs
			interpretant	dancers who can balance and quickly move ceramic plates without losing or breaking them	Stability and balance underpin ergonomic sitting.
Designer 6			sign	Traditional dance for couples is characterized by fluid motions of the hands and body.	Flowing couple's dance.
			object	The motif of the Bunga Kesidang as an analogy for the pattern's design	Malacca-themed recliner with Bunga Kesidang motif.
			interpretant	It's Craft. Bunga Kesidang motif recliner representing Malacca.	A unique Craft design Reclining chair emblazoned with the traditional Bunga Kesidang design, which is representative of Malacca
Designer 7			sign	Traditional couple dance with a smooth hand and body movements.	The simple pair sit facing one other like dancer.
			object	Soft colour and flower headrest cushion for ladies.	Feminine anthropometric shown in pastel tones, with a flower design at the back of the seat.
			interpretant	Anthropometric of a woman's physique with a delicate tone and flower headrest	Anthropometric of a woman's physique, rendered in muted tones, with a flower design adorning the headrest

Designer 8	 Gamelan Dance		sign	A magnificent, elegant, and exquisite design.	Kneeling and sitting politely
			object	Stunning, beautiful, elegant, and elegantly attractive fan design.	Craft design that is jaw-droppingly amazing, stunningly gorgeous, graceful, and exquisitely appealing.
			interpretant	Step gently and gracefully while including ornamental steps. Stunning, magnificent, tasteful, and aesthetically pleasing fan	The position of kneeling and sitting while maintaining a kind and courteous demeanour
Designer 9	 Igal-Igal Dance		sign	The traditional Igal-Igal dance is performed obviously on Salung kukku, which is characterised by fluid hand and body motions.	the steps of the Igal-Igal dance performed with the Salung Kukku.
			object	glittering with gold and silver, rich with beads, and associated with a certain tribe; sharp.	Backrests and armrests are made up of lines of nails strung together.
			interpretant	Distinctive attributes include a dancer's standing stance, long nails streamlined for appearance, and a floral design.	Igal-Igal dance is performed with the dancer standing in a stance in which long streamlines of nails are used as a backrest and armrest.
Designer 10	 Ngajat Dance		sign	A Ngajat warrior dance	A sitting native warrior in a ready attitude with a theme
			object	The Bunga Terung design is a popular shape for tattoos in the tribe, and the fabric is made from tree bark.	The object looks like a dancing warrior. It has a black and white Bunga Terung motif tattoo pattern.
			interpretant	Bunga Terung emblems resemble the Borneo Iban tribe.	A ready native warrior seated with an Iban motif Bunga Terung.
Designer 11	 Ulek Mayang Dance		sign	Elegance, wealth, secretiveness, and mystique are all words that describe luxury.	The gorgeous, breathtaking, and mighty
			object	Dancers' headwear streamlines the backrest.	The vibrant red and gold beads Power and unity are conveyed by the geometric pattern.
			interpretant	The dancers' headwear has been streamlined.	A princess sits tall and proud on her throne.
Designer 12	 Daling-Daling Dance		sign	Traditional couple dance with a smooth hand and body movements.	The simple pair sit facing one other like dancer.
			object	Shiny, gold, silver, luxurious, tribe-related,	The pattern decorated with tambuko buttons was made of gold and silver.
			interpretant	The couple moves in time to the rhythm and flow of their hands.	"Couple dance with facing together with yellow and geometrical pattern."
Designer 13			sign	Luxury, richness, thony , enigmatic	The glorious, stunning, powerful

	 <p>Menora Dance</p>		object	Geometric pattern and colourful beads on a Kecopong headdress	The colourful beads, with their splendour and vigorous meaning. The geometric motif conveys a sense of power and unity
			interpretant	The crown that the Siamese king wore	When a king sits on his throne, he sits with his back straight and his head held high.
Designer 14	 <p>Magunatip Dance</p>		sign	A native warrior man dance with a few postures	A native warrior in a seated position in a ready situation
			object	Warrior cloth is made from tree bark with natural colour and black and white symbols.	The bark of trees, the hair of animals, and symbols in black and white
			interpretant	The dancer is ready with a kneeling position to play with bamboo steps	In a sitting posture and in a prepared condition

From the analysis in Table 2, in the field of industrial design, semiotics is a tool that may be used to focus on studying goods as signs that are capable of representation. Because of this, the industrial designer is able to express the identity of the people who will be using the product by making a symbolic relationship with aspects of Malaysian culture. The cultural elements that are included in the furniture designed by the participants have the potential to make it suitable for usage as an art object in the context of international fairs and exhibitions.

#### 4.0 Conclusion

It is impossible to deny that the dances of Malaysian culture possess a singularity all their own as well as strong aesthetic elements that are intrinsic to Malaysian identity. As a result, it would be unfortunate if this legacy were to be abandoned and forgotten without receiving any acknowledgement. Making these cultures into ideas and subjects that need to be researched thoroughly in consideration of the meaning, forms, symbols, motifs, signs, or colours of these traditional items is one of the ways in which this heritage can be preserved. This is one of the ways in which this heritage can be preserved.

Cultural dance is implicitly a shared bond, which belongs to the specific community in Malaysia. It represents history and identity; the bond to the past, to today's present, and the future. All of the variations of traditional Malay dance and furniture design have been successfully incorporated into this study. These elements could act as a source of creativity for the creation of new furniture designs. The Malay culture and tradition will be preserved in this way, and at the same time, it will be evident that the project has Malaysian DNA, which may be manufactured and shown through a variety of techniques, including the use of local raw materials, the application of Malaysian emblems, and the inclusion of Malaysians' cultural traditions into furniture. The Malaysian tradition and culture will also be preserved for upcoming generations. It would result in a rise in adoration and devotion for Malaysia and all things created in Malaysia and will indirectly depict the Malaysian personality.

#### References

Ali, A., & Liem, A. (2015). The use and value of different co-creation and tools in the design process. In DS 80-3 Proceedings of the 20th International Conference on Engineering Design (ICED 15) Vol 3: Organisation and Management, Milan, Italy, 27-30.07. 15.

Isa, S.; Ali, A.; Zaiyana, W.; Hassan, Z. and Legino, R. (2020). Form Implementation of Seating Behaviour based on Kuda Kepang Cultural Dance Movements. In Proceedings of the 1st International Conference on Intermedia Arts and Creative Technology - CREATIVEARTS, ISBN 978-989-758-430-5, pages 118-124. DOI: 10.5220/0008527401180124

Goldschmidt, G. and Rodgers, P.A.(2013). The design thinking approaches of three different groups of designers based on self-reports. Design Studies 34. (2013). Pp 454-471

Isa, Siti S., and Andre Liem. (2014). "Enhancing Design Sensitivity and Creativity in the Detailing and Materialisation Stages of the Design Process through Specific Models and Prototypes." DS 81: Proceedings of NordDesign 2014, Espoo, Finland 27-29th

Hjelm, S. I. (2002). Semiotics in product design. CID. Hu, B., Zelenko, O., Pinxit, V., & Buys, L. (2019). A Social Semiotic Approach and a Visual Analysis Approach for Chinese Traditional Visual Language: A Case of Tea Packaging Design. Theory and Practice in Language Studies, 9(2), 168-177

Fraleigh, S. H. (2004). Dancing identity: Metaphysics in motion. University of Pittsburgh Press.

Cross, N. (2011). Design thinking: Understanding how designers think and work. Berg.

- Akintilo, A.A. (2001), *The Chair: A Study in ergonomic Design and Their application Within Society – Design for development in the Home Office*, university of Maryland, Baltimore County.
- Kelly, C. L. (2005). *The Beauty of Fit: Proportion and Anthropometry in Chair Design* (Doctoral dissertation, Georgia Institute of Technology).
- Saul, G., Lau, M., Mitani, J., & Igarashi, T. (2010, January). SketchChair: an all-in-one chair design system for end users. In *Proceedings of the fifth international conference on Tangible, embedded, and embodied interaction* (pp. 73-80).
- Carstensdottir, E., Gudmundsdottir, K., Valgardsson, G., & Vilhjalmsón, H. (2011, September). Where to sit? The study and implementation of seat selection in public places. In *International Workshop on Intelligent Virtual Agents* (pp. 48-54). Springer, Berlin, Heidelberg.
- Hu, Z., Strobl, J., Min, Q., Tan, M., & Chen, F. (2021). Visualizing the cultural landscape gene of traditional settlements in China: a semiotic perspective. *Heritage Science*, 9(1), 1-19.
- ÖDEN, H. Y. (2020). The Use of Illustration Art in Children Oriented Indoor and Furniture Designs: Application Examples and Techniques. *IDA: International Design and Art Journal*, 2(2), 161-175.
- Ventura, J., & Shvo, G. (2016). Breaking the language of design: semiclastics in the world of industrial design. *International Journal of Design Creativity and Innovation*, 4(3-4), 222-233.
- Umetani, N., Igarashi, T., & Mitra, N. J. (2012). Guided exploration of physically valid shapes for furniture redesign. *ACM Trans. Graph.*, 31(4), 86-1.
- LI Bing, GUAN Hui-yuan, WU Zhi-hui (2011) Study on Furniture Modular Design for Mass Customization. *CNKI Journal. Packaging Engineering*
- Hyland, T. (2016). *Craftwork as problem solving: ethnographic studies of design and making*.