

DESIGN EXPLORATION INSPIRED BY The 1925 ART DECO STYLE WITH MORPHOLOGICAL CHART

Devanny Gumulya¹⁾, Narima Safira²⁾

¹⁾ *Product Design, Faculty of Design, Pelita Harapan University*

e-mail : devanny.gumulya @uph.edu

ABSTRACT

The paper examines how the morphological chart derived from the engineering method is used in the creative design process. The chart method facilitates both diverging and logical thinking. Young designers who are still learning can benefit from this method because it offers a wide range of design exploration options. History has inspired many designers to design a lot of new things. Art Deco is a movement of design and decorative arts that began in Paris in 1925 and then developed internationally. An eclectic design style inspired by Egypt, Africa, Tribal Art, Cubism, Constructivism, and Futurism. The eclectic inspiration represented the advancement of transport technology at that time. At that time, cross-continental travel was booming. In the study, the art deco design elements were analyzed and combined with the student's personal preference design elements within the morphological charts. The study produces five new product designs, a multifunctional table that looks new but still reflects the spirit of art deco and student design. The study recommends that when using the morphological chart as an idea generation tool, three key variables are variation, unity, and abstraction. A good balance of ideas will be produced by balancing the three variables.

Keywords: history of product design, morphological chart, product design

INTRODUCTION

Product design is one of the key determinants for a product to succeed in a market, as consumers are attracted to product with good design that communicates significant value and good user experience quality (Bloch, 1995). Therefore, designer is in a constant searching on how to give novelty ideas to product by incorporating different aspect as source as inspiration like local culture or history.

Cagan (1980) said that understand the present, we must know the past. This statement carried deep meaning; we cannot create something by not learning the past. By not understanding the past, we will keep repeating the same mistakes that hinder progress in the future. Hence, history has always been a constant inspiration for the designer in various field. For example, a successful designer who is inspired by history is Vivienne Westwood encouraged by the 1970s punk subculture and created a fashion collection, that made met museum gave her the title of mother of punk ("Vivienne Westwood (born 1941) and the Postmodern Legacy of Punk Style | Essay | The Metropolitan Museum of Art | Heilbrunn Timeline of Art History," n.d.)



Figure 1. 1 Punk Vivienne Westwood Collection

Source: https://www.metmuseum.org/toah/hd/vivw/hd_vivw.htm

History has inspired designer beyond form, formafantasma an Italian design studio, explore the designer's local heritage and inspired by ancient Sicilian Italy baking technique called Salemi, in which flour-based material is moulded into architectural ornamentation. This baking technique inspired designers to make an edible home decor collection title baked in 2009. This new approach brings innovation and competitiveness to the saturated home decor market



Figure 1. 2 Bake Collection

Source: <https://www.dezeen.com/2009/10/21/baked-by-formafantasma/>

From the two examples, it is concluded that history has inspired designers from form to content. Using history as inspiration has been proven can bring innovativeness in the design process. Therefore, it is a good exercise for future designer to learn how to design inspired by history.

History has been a compulsory subject for product design students in which they can learn about various historic design style that came about as industrial revolution counteraction started from Arts And Crafts Movement, Art Nouveau, Art Deco, Streamline, Bauhaus, De Stijl And Postmodernism Design Movement Memphis. This paper is an analysis of student's design history projects to create a design that is inspired by Art Deco style that is flourished in United States.

Art Deco is a movement of design and decorative arts, born during World War I and ended before World War II. Art Deco was first launched in 1925 and developed in 1940. The name Art Deco came from an exhibition or conference called *Conférence l'Exposition Internationale des Arts Decoratifs Industriels et Modernes* in Paris. After which the Art Deco style entered America in the 1930s and became a style of its own known as Art Deco US (US). During 1929, most of the home had electricity, this boost the sales of electrical devices. The social and cultural life was on the rise, Hollywood and Jazz music became the star that define the era. Cinemas, dance halls, sport arena and luxury hotels were everywhere as the leisure and entertainment industries prospered (Miller, 2015).

At first, the Art Deco was luxuriously designed, but then the style transformed into more simple and modern after the Great Depression, a financial crisis that happened as a result of the fall of Wall Street in 1929. The crisis led to a loss of public confidence and US was in need for good national strategy for

economic recovery. The transformation could be seen from the use of expensive materials such as silver, crystals, ivory, jade and lacquer, changed to the use of cheaper and mass-produced materials such as chromium, plastic and other materials that cater to the tastes of the middle class. Later in 1930s, Art Deco in US was known as Streamline style. By embracing new technologies and materials, streamline style has a strong impact on American architecture and decorative arts. Streamline style gave US citizen a much-needed economic boost, because the design could be mass-produced and use cheap material. Both Art Deco and Streamline have become classic design styles that have an influence on the world of architecture, interiors, clothing and lifestyle. It can be seen from classic Hollywood films that adapt Art Deco and Streamline style. A good example of a movie that illustrated both of the style is the 2013 movie adaptation of F. Scott Fitzgerald's *The Great Gatsby* novel in 1925. Streamline design also plays a role in the development of the automotive design. It was stated by Miller (2015) that the number of vehicles on American roads rose by half a million in 1914 to 26 million in 1929, one in five of the population.

Art Deco design styles also played a role in many architectural styles in Indonesia during the 1920s-1930s, particularly in Jakarta and Bandung. Buildings in the Old City District, Jakarta Train Station, and many Bandung hotel buildings, such as Preanger, Savoy Homan Hotel, were designed in the Art Deco architecture. The Art Deco building in Bandung was built by P. Schoemaker and Associates, a Dutch architect born in Semarang. Below, we can see some architectural similarities between the Preanger Hotel building in Bandung and the Streamline Hotel in Miami, USA.















Figure 1. 3 Preanger Hotel (left) and Streamline Hotel in Miami US

Source: https://id.wikipedia.org/wiki/Prima_Grand_Preanger,
<https://thewestologist.wordpress.com/2014/04/04/spot-a-style-streamline-moderne/>

Art Deco US style are summed up below

Three key objects		
		
Jacques-Emile Ruhlmann (1879-1933)	In the Manner of Sue et Mare & André Groult,	Vanity with mirror, c. 1929- 1932

PEST Background	
Politic	Post world war 1, the roaring twenties, a decade of economic boom and prosperity, driven by recovery from wartime destruction and postponed spending. A time of construction progress built many skyscrapers and increase growth of consumer goods.
Economy	From boom to Great Depression in 1929. Then, change into a more simple and modest style adopting streamline form on automotive, a water drop shape that lowers the friction drag between substance like water and air. The shape increase speed. Streamline shape became a sign of progress, dynamism, and symbol of hope how America can get out from the great depression by putting streamline shape on everyday life product like kitchen mixer, pencil sharpener, refrigerator, and etc.
Social	The jazzy rhythms and the fantasy world of Hollywood create imagination. This build the cultural live, where everybody enjoys art, music, and theater as form of entertainment.
Technology	Between 1908 – 1927 Henry Ford mass produced 15 million model T automobile. For the first time, car was affordable for many people. One out five American had a car during that time.
Design Element	Paradigm
Form 3d: stylized abstract geometric	Art deco is an eclectic decorative art influenced by several sources: Egypt, tribal art, African art, Ballet Russe of Rusia, cubism, constructivism and futurism . As long travel became common and more luxurious and there was a discovery of Tutankhamun's tomb in 1922, designers may take inspiration from anywhere to offer a sense of elegant, exotic design. The most famous French ocean expensive liner: Normandie, in which all the interior and furniture are made in Art Deco Style .
Shape 2d: angular shape  sweeping curve 	Early Art Deco US before the great depression: Glamor and luxurious. American famous Art Deco Skyscrapers: Chrysler building, Rockefeller center, Empire State Building   

<p>Pattern:</p>  <p>Zig zag</p>  <p>Chevron</p>  <p>Sunburst</p>  <p>Shell</p>	<p>Later Art Deco US after the great depression: Streamline apply the streamline shape into everyday object like radio, pencil sharpener, coffee machine and building. Radio was a common thing a US household.</p>  
<p>Material</p> <p>Aluminium, stainless steel, bakelite, animal skin, glass, inlay, veneer and shiny fabric</p> 	<p>As streamline is apply to any everyday object, term styling came. Reshaping an already exist product purely on aesthetic for market considerations to make it more attractive to the consumer. The aim for styling is to boost sales after the Great depression in 1929. Design became the mean to recover US economy back from the financial crisis.</p>

Source: developed from Hauffe (1996), Miller (2006), Miller (2016)













METHOD

Derived from morphology means learning about form or structure. Morphological chart originated from engineering discipline. A morphological chart is “a systematic approach to analyse the structure or form of an idea, device, product, system or process to generate ideas in a structured and systematic way” (Innovative et al., 2017). The morphological chart is part of idea generation tools that are both intuitive or logical. The tool promotes both creative divergent thinking and logical. (Shah, 1998 cited in Smith, Troy, & Summers, 2006)

The tool enable designer to examine all possible combinations of all the variables in a systematic way. The steps to do morphological chart:

1. Identify the components that will give solution to the problem
2. List several feasible solutions in each component.
3. Make the morphological chart matrix
4. Combine each row and column and generate feasible solutions.

The study morphological chart combining Art Deco US design element and design student's preference. The object of design is multifunction table.

Component	Art Deco US design element	Design student's preference	Art Deco US design element	Design student's preference
Top				
Drawer				
Legs				

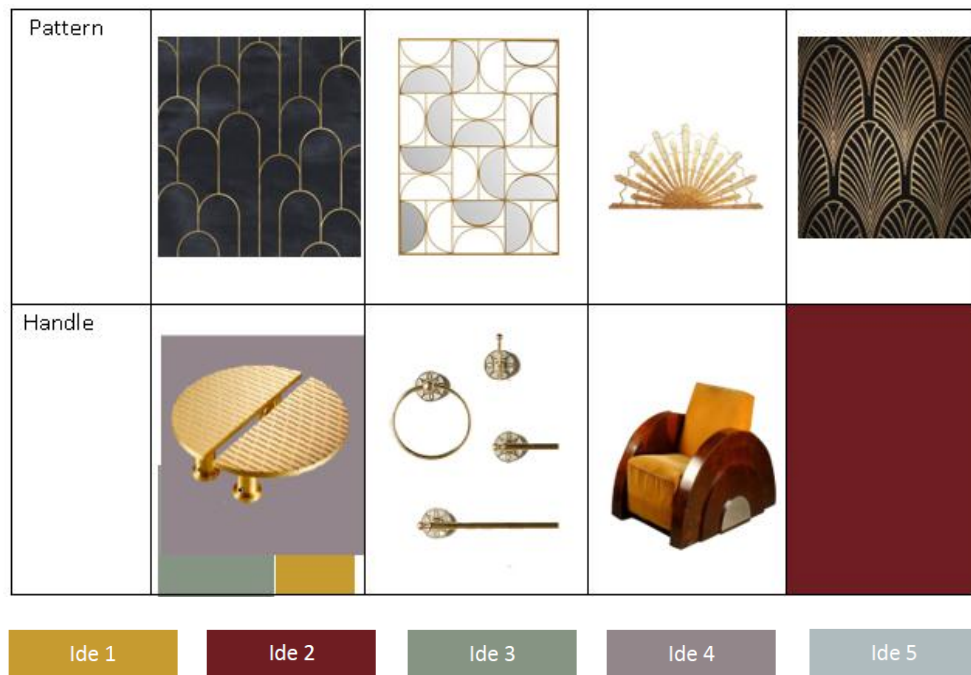


Figure 1. 4 Study Morphological Chart

Source: http://wikid.io.tudelft.nl/WikID/index.php/Morphological_chart

RESULT

From the morphological chart sparks five new multifunction table ideas.

Component	Top	Drawer	Legs	Pattern	Handle
Reference	Art Deco US element	Design student's preference	Art Deco US element	Design student's preference	Art Deco US element
Idea 1					

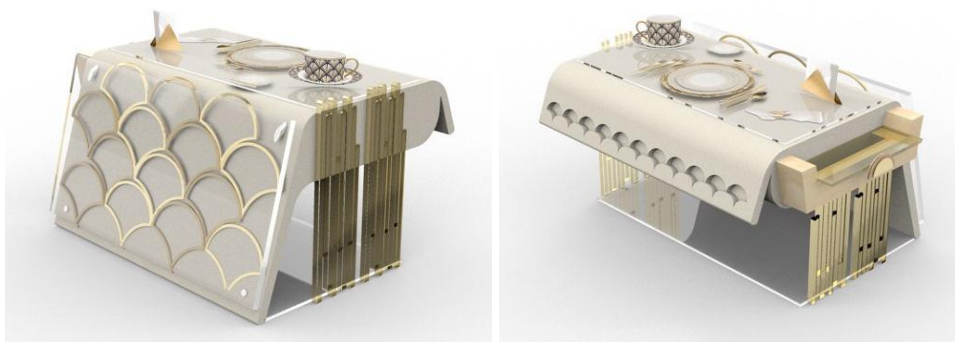


Figure 1. 5 Multifunction Table 1

Source: Researcher's Data




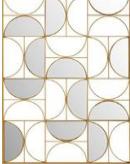





Component Reference	Top	Drawer	Legs	Pattern
Idea 2				



Figure 1. 6 Multifunction Table 2
Source: Researcher's Data

Component Reference	Top	Drawer	Legs	Pattern	Handle
Idea 3					

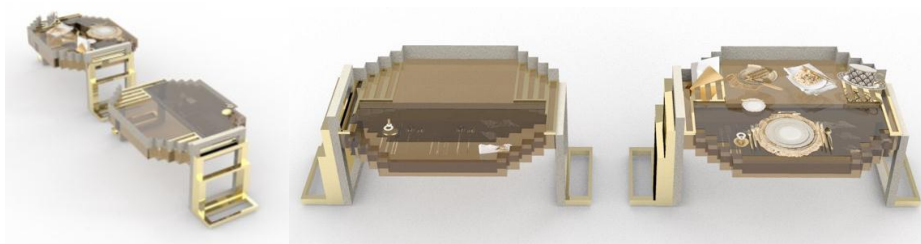







Figure 1. 7 Multifunction Table 3
Source: Researcher's Data

Component	Top	Drawer	Legs	Pattern	Handle
Reference	Design student's preference	Design student's preference	Art Deco US element	Art Deco US element	Art Deco US element
Idea 4					

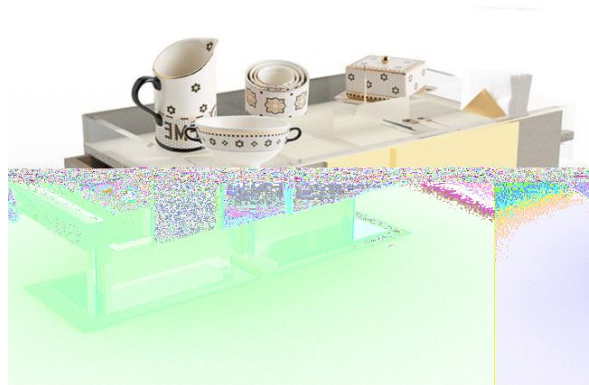


Figure 1. 8 Multifunction Table 4
Source: Researcher's Data




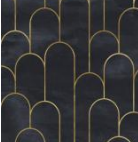
Component	Top	Drawer	Legs	Pattern
Reference	Art Deco US element	Design student's preference	Design student's preference	Art Deco US element
Idea 5				



Figure 1. 9 Multifunction Table 5
Source: Researcher's Data

CONCLUSION

Through the study several recommendations several key principles when applying morphological chart into design process are:

1. Level of variations

By inserting other object that are not relevant to the design object into the morphological chart, it can yield unique ideas. So, when designing a table better do not put all kind of table as inspiration on the morphological chart. This can hinder the creativity process.

2. Level of unity

As ideas in morphological chart build up by combining different elements in the columns. The different kind elements may confuse designer on how to make all the element coherent and unity. Several designs can be seen are very fragmented.

3. Level of abstraction

Abstraction mindset is also needed in the process of generating ideas using morphological chart. It can be seen from the five-design proposed above many of design ideas still very similar to the inspiration. By combining different means, morphological chart aims to spark ideas, not completely taking the form and apply it on different context. The form still needs to be explored.

ACKNOWLEDGEMENT

We thank our Faculty of Design Dean Dr. Martin L. Katoppo S.T.M.T., and the Chairman of Center for Research and Community Development (CRD) Dr.-Ing.Ihan Martoyo, S.T., M.Sc. This article is a research publication registered in Center for Research and Community Development (CRD) of Pelita Harapan University under number P-091-S-SOD/III/2020.

REFERENCE

- A quote by Carl Sagan. (n.d.). Retrieved from <https://www.goodreads.com/quotes/194992-you-have-to-know-the-past-to-understand-the-present>.
- Bloch, P. H. (1995). Seeking the ideal form: Product design and consumer response. *Journal of marketing*, 59(3), 16-29.
- Hauffe, Thomas. *Design: An Illustrated Historical Overview*. Editions Barron's, 1996.
- Miller, J. (2005). *Art deco*. Penguin.
- Miller, J. (2005). *Furniture: world styles from classical to contemporary*. Penguin.
- Miller, J. (2016). *Art Deco: Living with Art Deco Style*. Miller's, a division of Mitchell Beazley.
- "Vivienne Westwood (lahir 1941) dan Postmodern Legacy of Punk Style | Esai | Museum Seni Metropolitan | Heilbrunn Timeline Sejarah Seni," n.d