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# Study of Art Plaza Circulation Theory and Shape of Art Plaza

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**Abstract**

*The circulation system is a vital linking infrastructure that connects various activities and uses land on an area and inside a building that considers functional, economic, flexibility and comfort aspects. The explanation of this theory emphasizes the uniqueness of the building itself. So that there are various shapes of buildings in an effort to adjust to environmental conditions, climate, and natural surroundings. As a result, the resulting building has a special shapeation in accordance with the idea of an architect.*

## Introduction

Circulation is a pattern of traffic or movement in an area or building. To answer the problem of circulation patterns, a theory of circulation is needed. According to Haris (1975) understanding. According to Ashihara (1981), the circulation system is a vital connecting platshape that connects various activities and uses of land on an area and inside a building that considers functional, economic, flexibility and comfort aspects. The characteristics of human circulation are as follows: (1) Allowance and flexibility in movement. (2) Low speed. (3) In accordance with the human scale.

According to Faroga (in 2014 Unparalleled graduated E-journal. 7) the principles of circulation design that need to be considered are (1) Quality, a road can be made more attractive and not monotonous by setting the route, setting the achievement of buildings, and setting scenery and vista. In addition, as part of exterior space, the circulation system should also be designed with aesthetic principles. For example, color, balance, shape, line, texture, rhythm, combine to shape beauty in the designed circulation system. (2) Aesthetics, a circulation system must be designed to operate at an efficient speed, especially on busy roads that are used. Factors that must be considered in this case are the location of the bends, branches, steepness, type of pavement used, as well as the location of the central points through which the track passes. (3) Speed, the more intersections there are and the closer they are to each other, the higher the risk of accidents. Therefore, details must be given which causes the speed of the vehicle user to move slower by itself. These details can be in the shape of distractions in physical shape, or effective symbols. (4) Control of achievement points, the more intersections there are and the closer they are to each other, the higher the risk of accidents. Therefore, details must be given which causes

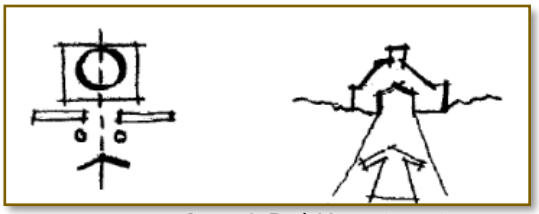
the speed of the vehicle used to move slower by itself. These details can be distractions in physical shape or effective symbols.

*Guidelines in Circulation Design*

Furthermore according to Faroga (2014) General guidelines in the Design of Entrance Achievement Circulation. (1) Boundaries Between Spaces, between one circulation system and another circulation system, must have clear boundaries in order to avoid confusion in circulation/traffic that is at risk of chaos/accident. For example, between the pedestrian circulation system and the motorized vehicle circulation system, there are dividing boundaries between the shape of different surface heights, material differences, and physical barriers in the shape of tree lanes. (2) Time Separation, time separation can be seen in the crossroads area. For example, one vehicle lane is stopped to give opportunities to pedestrians. Meanwhile, on other lines, vehicles can go. (3) Accessibility, in the design of circulation systems, additional details are needed to determine who can access the circulation system. For example, in order for the road to be passed by elderly and weak people, as well as people with special needs, or people who use wheelchairs, it requires ramp details, selection of certain materials, types of the railing, etc.

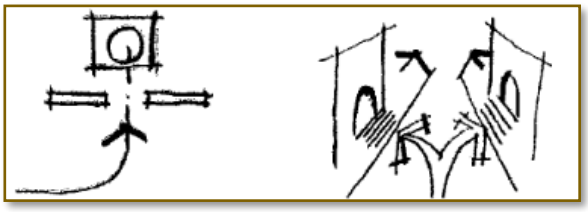
The circulation system in a site and room is very necessary for its users, therefore Plaza Arts will have a value when considering circulation outside of space and circulation in space. The explanation is Circulation outside the room, to determine outdoor circulation at Plaza Seni, the discussion is needed) Achievement at Plaza Seni, the achievement of a building and its entrance vary in travel time, from several stages to spaces that are compacted to a route the long, winding path that must be taken beforehand. According to Ching & Dai-Kam (1996) the achievements of the building can be divided into three, namely:

First, a frontal achievement is an achievement that leads directly to a place to enter, through a path that is a straight axis. The purpose of this achievement is to expose the facade and entrance of a building.



Source: Ching & Dai-Kam (1996)
Figure 2.2: Frontal Achievement

Second, the achievement of disguised is an achievement by diverting the trajectory of other departments for indirect achievement. The path can be changed its direction one or more times to destroy and extend the sequence of achievements. So that on this achievement visually, the building appears perspective.



Source: Ching& Dai-Kam (1996)
Figure 2.3: Achievement in disguise

Third, the achievement of spinning is the achievement by turning so that it surrounds the building. the intention to highlight is the three-dimensional shape of a building.

Source: Ching & Dai-Kam (1996)
Figure 2.4: Spinning achievement

According to Suptandar (2008), some things need to be considered in designing circulation in the room namely; (1) Human activities are mostly carried out in space, so the important factor is the design of the circulation that occurs in the room. (2) The function of space is influenced by human activities in that it affects the dimensions of space, the organization of space, the size of circulation, the location and opening of windows and doors. (3) Room dimensions are not only determined by human activities but also by the scale and proportion of humans themselves.

To determine the circulation outside the room at Plaza Art, the discussions needed include the relationship between space and road; According to Ching (1996), the road might be connected with space. Through spaces, their characteristics are: (1) The unity of each space is maintained, (2) Flexible road configuration, (3) Intermediary spaces can be used to connect the road with its spaces.

*Theory of Plaza Art Shapes*

Answering problems with the appearance of buildings requires shape theory. According to Häring (1970), a shape is an embodiment of the organization of space which is the result of a thought process. This process is based on a statement of self-effort and consideration of functions.

Shape according to Walter Grophius (1965) can be divided into 2, namely: technical shape (technical shape), an art shape, where the two try to be united as a unified whole. While the compactness of shapes according to him is: "a clear conceptual shape, which is caught in one glance without the slightest memory of the complexity of the technical organism". According to him taste is the source of shape. Therefore he is one of the expressionist architects, who argues that the origin of shape is the interior of space.

The shape principle of Wright (2008) is different from Grophius. He tried to make a horizontal shape following the shape of the earth's surface. He has a desire: "to spread buildings that once existed in our extreme climates merely to resemble a box, cut into apartments, into a more organic expression". In this case, he tries to unite shape and function, analogous to natural phenomena, nature has taught how buildings can be harmonious with their environment. Harmonious in this case can be seen from the harmony of shapes which also originates from inner functions, namely: the proper use of the material and the machinery and tools used.

*Shape Theory*

Theories relating to the origin of shapes according to Gelernter (1995), namely; (a) The architectural shape is created according to its function. (b) In this theory, a good building is a building shapeed by various physical, social, psychological, and symbolic functions. (c) Shapes born from the process of imagination. (d) In this theory, the idea of pure architectural shape comes from the intuition and ability of the designer. The shape created is a special feeling from the designer in making its shapes, or putting old ideas together with new ones and methods that

have never been used before. (e) Shape exists because of the spirit of the present (spirit of age). In this case, the designer in designing the shape is affected by the present spirit or desire to appear up to date, in this case, there is a possibility that a designer follows a certain style from another architect, so there is a psychological influence in the process of creating shapes. (f) The architectural shape can be distinguished by the influence of socioeconomic conditions. This theory suggests that a person's artistic endeavors are affected by the effort that develops at that time. But socioeconomic conditions affect the shape of buildings that occur, here there is a social hierarchy as an individual reflection. In this case, there are special shapes relating to the existence of socioeconomic factors, in this case financially from the order giver or client. (g) The architectural shape is derived from the principle of time which reflects the advantages or specificities of the architect, culture, and climate

This theory emphasizes the uniqueness of the building itself. So that there are various shapes of buildings in an effort to adjust to environmental conditions, climate, and natural surroundings. As a result, the resulting building has a special shapeation in accordance with the architect's idea.

*Factors affecting shape*

The embodiment of a shape is inseparable from the influence of the demands of user activity needs, the demands for satisfaction of beauty and security. (1) Function; The role of the function concerns the fulfillment of human activities that arise as a consequence of the fulfillment of human needs, both physical and spiritual needs. (2) Symbols; Symbols can appear in very diverse contexts and are used for various purposes. In architecture, symbol recognition is a process that occurs in individuals and society through the five senses which can then lead to a perception. A symbol is a deliberate, planned, highly calculated attempt to translate concepts into illustrative and sensory terms (physical embodiments). Symbols can be divided into several categories which are classified based on the role of the symbol itself, the impression that is generated and the message conveyed through the displays of certain shapes; (a) A rather subtle symbol, this symbol states the role of a shape. An example is the serrations on the roof of a factory; (b) Symbols of metaphor, people have certain views or interpretations of a building shape that is seen and observed, either in part or in whole. This interpretation is strongly influenced by their background, namely the level of intelligence and space experience. There is a tendency for them to compare the buildings they see with other substances that are considered to have similar characteristics. This is where the role of metaphors as a medium for the transfer of terms or imaging from one object to another, which comes from the stored memory that first appears when identifying something; (c) Symbols as identification elements are reflected in shapes which are generally known by the community through their characteristics and functions in a building. An example is the dome of a mosque.

*System structure*

With the advancement of human knowledge, the structure also develops, both from its construction, materials, and methods of development. Thus it is very likely to create a strong and beautiful structure that has a profound effect on the appearance of the materialized shape.

*Building Appearance Theory*

Expression in a building will become a communication medium to show what the building's function is, what the building looks like, how big and various other statements that arise in the mind of someone who sees the building. So the appearance of the building is one important factor that can give an initial impression on people who see it.

*The concept of building shapes in architecture*

The shape in architecture is a media or communication tool to convey the meaning contained by the shape itself or a tool to convey certain messages from the architect to the public as recipients.

Shape has a role that is born from function, besides the shape itself is also realized by materials, structures, and symbols. The shape of the building that functions, outwardly reveals the purpose and purpose of the building, accompanied by an understanding of the illusion.

*Building elements to support the appearance of the building*

There are important physical elements in Rob Krier architecture to communicate the appearance of buildings, namely; (1) Building facade (exterior). The facade is the most important architectural element in its ability to communicate the functions of a building. In other words, the façade has the opportunity directly to speak or give an explanation of the theme of a building. (2) Interior space. The smallest unity in a building is a room whose quality determines the image of the building. (3) Building plan and mass are the smallest elements in terms of their contribution to communicating the physical expression of a building. However, the interior arrangement and facade appearance resulted from the processing of the floor plan and building mass. So the building plan and mass have a vital role that cannot be ignored in shapeing the expression of a design.

According to Sutedjo (1982) elements that can communicate the desired expression of a building are:

*Texture*

Textures basically have associations from recorded sources of experience. There are two kinds of texture, namely fine texture and rough texture. Fine texture has a pleasant and convincing nature, while rough texture has a little warning that might be strong enough to give the impression of a threat, and in addition, reminds us of the aggressive forces that make it.

The texture of the shape can strengthen or reduce the impression that is basically caused by the shape itself. Texture also has the power to change the appearance of shapes by urging and defeating their sense of shape. A coarse texture that is given to a shape that is actually firm and precise, will tend to make the shape amorphous because in addition to arousing the sense of touch, the texture also deceives the eye at the limits that have been firmly and precisely set.

A smooth and soft surface, highlighting the difference between light and shadow, has a different effect but when rubbed so that like glass the difference between light and shadow decreases. With the reflection, objects that have a solid impression become less dense in appearance.

Texture not only regulates the quality of density but is also used to regulate "the feeling of space" especially in the transition from space into inner space.

*Pattern*

Patterns are shapeed by (1) Vertical Lines; high and strong impression. (2) Horizontal Lines; gives the impression of calm and loudness. (3) Diagonal Lines; the line for movement. (4) Curved Lines; dynamic and flexible impression

*Shape/Mass*

Shapes are units that have lines, layers, volume, texture and color elements. The combination of all the color elements that produce an expression. These units can stand alone as a whole or are part of a larger section.

To analyze the shape, it is better to evaluate the reciprocal relationship between the parts of the shape and the whole shape, because the nature of the shape part is determined by; (1) The degree of concentration; (2) Its ability to join other shapes of parts

*Colour*

Colour in building design is an element that can not be ignored. Color has a lot of influence on human life constantly and deeply. Besides, color is also very influential in the shapeation of the atmosphere, especially to arouse emotional users (psychologically). Each type of color has its own personality. The use of color properly, can cause someone's imagination or can cause the mood we want.

By understanding the nature and characteristics of colors, we can express the individuality of a building and create a comfortable space and "invite" the users in it.

## Conclusion

In transacting and integrating with an emphasis on circulation patterns both outside space and inside space at the Art Plaza must pay attention to aspects of space by considering the function of space influenced by human activities in it affect the organization of space, spatial relations, forms of space circulation, and the type of space circulation. The dimensions of the room are not only determined by human activities but also are influenced by the scale and proportion of human beings themselves and environmental aspects by considering things on the site, which can be in the form of circulation from the environment to buildings and vice versa.

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