

# Immaterial Aspects of Traditional Market on Conceptualizing Socio-Eco Tropical Space

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**Abstract.** The structure of traditional markets in Indonesian is getting massive and solid since it always finding a new potential direction for sustainable form. The uses of material and technology are dominated by how the building was built and controlling how peoples live within the environment. In contrast, the interaction between human with nature and the environment are often ignored. The need for a healthy traditional market has become a major issue recently, but most of the current traditional market concepts suggest otherwise. The idea of this paper is to reconsider the concept of the traditional market, drawing on Hill's theory of immaterial architecture which presents the significance and importance of the immaterial as material in architecture. This study begins by observing daily practices in traditional markets to explore possible immaterial aspects and then discovering potential mechanisms of those aspects. The aim is to explore the possibilities of immaterial aspects of transforming the concept of the traditional market from social-cultural into socio-eco tropical space.

## INTRODUCTION

The existence of traditional markets as part of urban space has a positive impact on the growth of urban life. It supports the city by its function as social spaces [1] [2]. As in Indonesia, it has an important role not exclusively used for economic activities, but also socio-cultural interaction space. The growing number of capacity becomes the main issue in its development. Aspects of form and material were seen as the main concern to solve that issue by increasing the building area. It solved the problem of space requirements, but it also potential to bring another issue. The building is getting massive and solid. The interaction between humans, nature, and the environment is increasingly being abandoned.

This study explores the concept of the traditional market in Indonesian that can be understood more than just a physical form to accommodate the socio-cultural activities. The fact that most traditional markets are deal with everyday practice could become an opportunity to revisit the concept of the traditional market. It is argued that important to see traditional markets from another perspective, not only on its material aspects but also immaterial as part of a built environment that has a strong relationship with human senses [3].

The study is situated within the context of one street market in Semarang, Peterongan is a traditional market that is rich in immaterial aspects in its everyday life. It is one of the traditional markets which has characteristic close to the original concept of the traditional market in Indonesia. The focused study is the immaterial aspect of the street market that may expand the concept of the traditional market from socio-cultural to socio-eco tropical space.

This paper begins with an overview of the traditional market as the socio-cultural space. It followed by a theoretical exploration of immaterial architecture, drawing on Hill's [3] theory of immaterial and material which presents the significance and importance of the immaterial as material in architecture. It advocates an architecture that fuses the

immaterial and the material and considers its consequences, challenging preconceptions about architecture, its practice, purpose, matter, and use. As immaterial–material weaves together as a conjunction, not opposition [3]. Finally, the paper concludes the immaterial aspects of the traditional market that may conceptualize the context of the market into socio-eco tropical space.

## TRADITIONAL MARKET AS SOCIO-ECO TROPICAL SPACE

The urban concept in Indonesia places traditional markets not only as an economic facility and regional trade node [6], but also as social functions, and conceptions of people's life [5]. It is one main characteristic of the traditional market in Indonesia cities that has a strong relationship with the humanist factor to build closeness and "kinship" relationships between traders and buyers [6] [7]. Another characteristic of the traditional market is their presence which closes to tropical conditions. Fields, roads, and other open spaces are usually preferred as places for trading activities. Historically, the existence of traditional markets in Indonesia began with activities that took place under shady trees without any permanent structure. The phenomenon shows that at the beginning the existence of traditional markets was very close to nature, as socio tropical space. The open space exposed the trading activities rich with sunlight and good air circulation. By using a non-permanent structure, space can still be used for various other activities at different times. The place grew as a node of regional exchange of goods and services which then generated other various activities [6].

The concept of the non-permanent market still exists in several places in Indonesia, which are widely known as street markets. But in some cases, trading activities tend to grow out of control. Most of them are responded by moving the activities in a permanent structure. The concept of the traditional market which previously becomes part of the urban space that blends with the surrounding environment is slowly changing into a permanent building. Initially, the function of the structure only becomes an enclosure to cover trading activities. As the number of traders is increasing over time, it demands a larger space. Most of the permanent structures were transformed into a multilevel building structure which solved the problem of space requirements, but it has the potential to bring another issue.

The original concept of the traditional market as a tropical space was getting away since the market building has a permanent structure. Most of the buildings come with large spans structure that reduces the sunlight from entering the building optimally. The overload capacity also sometimes blocked the air circulation which potential to cause any health problems. Another issue occurs when many informal traders prefer to trade in front of and around the building. The market traders compete with the informal traders because many of them sell covering the front and the entrance to the market which negatively impacts the front of the traditional market then caused the traditional market to look shabby and crumpled.

## IMMATERIAL AND THE CREATION OF SPACE

Immaterial can be understood from certain definitions. This term was introduced by Hill [3] as an idea, a formless phenomenon, a technological development towards lightness, a certitude, or a programmatic focus on actions rather than forms. As part of the architecture process, immaterial refers to the realm of ideas which has a strong relation to intellectual thing and philosophy where subordinates architecture precisely because it is so indebted to it. Philosophical discourse is only able to preserve the image of architecture with which it organizes and describes itself by veiling its indebtedness to that image [8]. Hill [3] focused on immaterial architecture as the perceived absence of matter more than the actual absence of matter, devise new means to explore old concerns: the creativity of the architect and the user. The user decides whether architecture is immaterial. But the architect, or any other architectural producer, creates material conditions in which that decision can be made [3].

Material is commonly associated with the form, while immaterial related to formless things, such as smell or touch [3]. This idea is based on experience and interpretation that is close to subjectivity. The richness of the user's experience of any building depends on the awareness of all the senses, but immaterial architecture may trigger a sense more often associated with the immaterial [3]. The experience of immaterial architecture is based on contradictory sensations and is appropriate for active and creative engagement with architecture. The complexity of the whole experience depends upon the user interpretations of what is present and absent.

Others saw immaterial architecture depends on perception, which involves creative interpretation, fiction, not facts. Visual perception and others are a form of intelligent decision-making from limited sensory evidence [9]. One important thing is that seeing an object requires an intelligent guess because the sensory signal is not sufficient for

direct perception. Therefore, memory has an important role to play in perceptions that present a hypothesis [10]. This is based on the fact that retinal images are open to unlimited interpretation. Immaterial architecture that is bound to perception focuses only on the ability to perceive a person's and the relationship between architectural objects, space, and users.

On the other hand, Kengo Kuma [11] strives to establish close relationships between his architecture and its urban, natural, or cultural environment, whereby they merge as seamlessly as possible. He explores constructive and material conditions to nurture perceptual realms that are immaterial or phenomenological and, as such, appeal to all senses and impart profound experiences. Above all, however, his ultimate goal is to create meaningful human environments.

Immaterial has an important role in the production of spaces. Immaterial should combine with the material in architecture practice. As Hill [3] mentioned that immaterial is something related to an expression of a person, a strong feeling is needed to have. It concerns the way the building could express the feeling that humans can also feel it [12]. The practice of architects is expected to be as solid and reassuring as their buildings. Concerning immaterial architecture, therefore, architects are understandably cautious. An architect who persuades a client of the merits of an architecture that is insubstantial and unpredictable still faces numerous difficulties to see it built, such as building regulations and contractual liability. On a more fundamental note, immaterial architecture revels in qualities, the subjective, unpredictable, porous, and ephemeral.

## IMMATERIAL ASPECTS OF TRADITIONAL MARKET

In general, the way of seeing is influenced by what we see and we believe. A person's knowledge sometimes limits his point of view in seeing other things or realities that exist in everyday phenomenon [13]. Peterongan street market in Semarang, Central Java was chosen as the case study of immaterial architecture since this market is situated in a tropical environment. It is located in an open area, full of sunlight and airflow, detached from the building form and permanent structure of the enclosure.

The street markets produced complexity as a result of their informality, as a legal and organic outbreak of micro-entrepreneurship [14]. In most traditional markets, peoples saw this phenomenon as an involving order, aesthetic judgment, and appropriateness [14]. As Mary Douglas notes this kind of thing as 'dirt' [15], a matter out of place. The term 'dirt' is used to explain what is generally considered as 'polluted', 'unclean' or 'taboo'. Dirt is not intrinsic. Rather it is ascribed to something that is denied because it disturbs.

In another point of view, that 'dirt' phenomenon might show the nature of the traditional market's life. As the way how the original concept of the traditional market. If we see this phenomenon from other perspectives, it might consist of another aspect that brings the market more than only socio-cultural but also socio-eco tropical. In achieving that we cannot just rely on the material aspects. As Hill [3] argues that the immaterial is as important to architecture as the material

The reality that can be seen from the surface of the activities in the traditional market is only the busyness of buyers and sellers with various conditions. A mapping technique should be used to discover something new through the process of gathering information, compiling, dismantling, and building speculations about the various possibilities that exist. A layering method can help to reveal a hidden potential from a certain phenomenon [16], the invisible reality of immaterial aspects. This method is carried out by looking at the superimpose of various layers of activities that are separated from one to another to obtain any diversity (various independent) that exist in the phenomenon (thickened surface).

The diagram in figure 1 showed layers of immaterial and material aspects. When Hill [3] mentions that immaterial is the perceived absence of matter more, it doesn't mean that there is no material. Immaterial aspects refer here is another form of material, the formless. Traditional market like Peterongan street market consists of everyday life that can be seen deeper on its immaterial aspects. Such as the expression between the seller and the buyer that bring life on the market, the container that determines the territory between the seller and the buyer. The distinctive smell that can be found in the market atmosphere, and various other realities that may exist in the market.

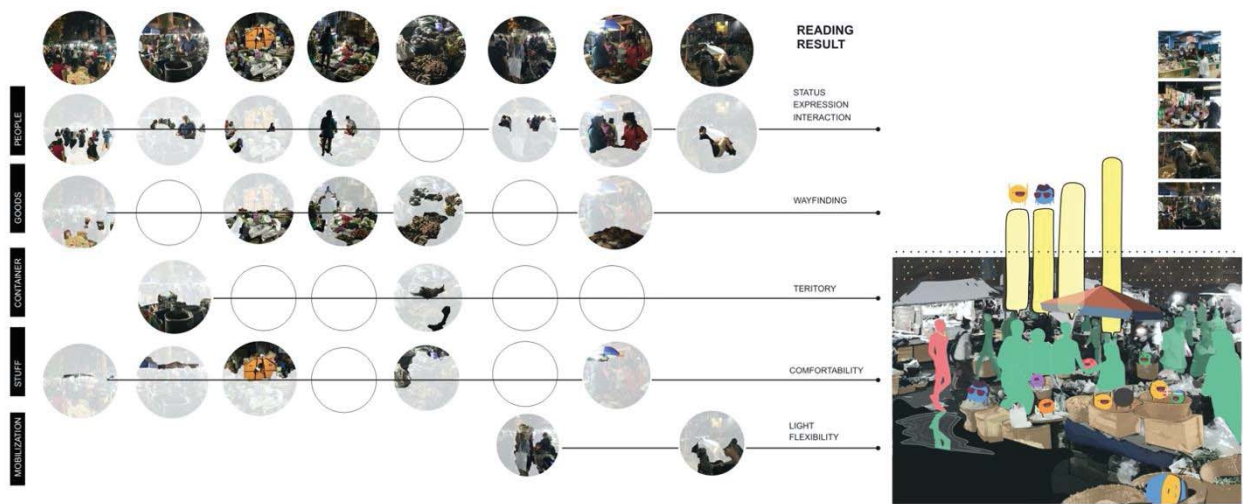


FIGURE 1. Mapping diagram of immaterial aspects in the street market of Peterongan, Semarang Central Java

Based on the everyday life of the street market, we can also indicate the potential of immaterial aspects in conceptualizing the traditional market into eco-tropical space. It focuses on the relationship of persons with space, and nature. Human's ability to perceive a person's and the relationship between architectural objects, space, and built environment bring another atmosphere of comfortability. The existence of this market in an open space rich in sunlight and free air is not seen as a problem. Everyone can feel the free-flowing air immediately, or the sunlight slowly warming the body. The rain which may come anytime is not seen as an obstacle for the activities in this market. The various smells even bring the genius loci of this place. The mechanism of darkness, sunlight, air, or even smells filled space and interact with human bodies and their everyday activities have expanded the original concept of socio-cultural and tropical space into socio-eco tropical space.

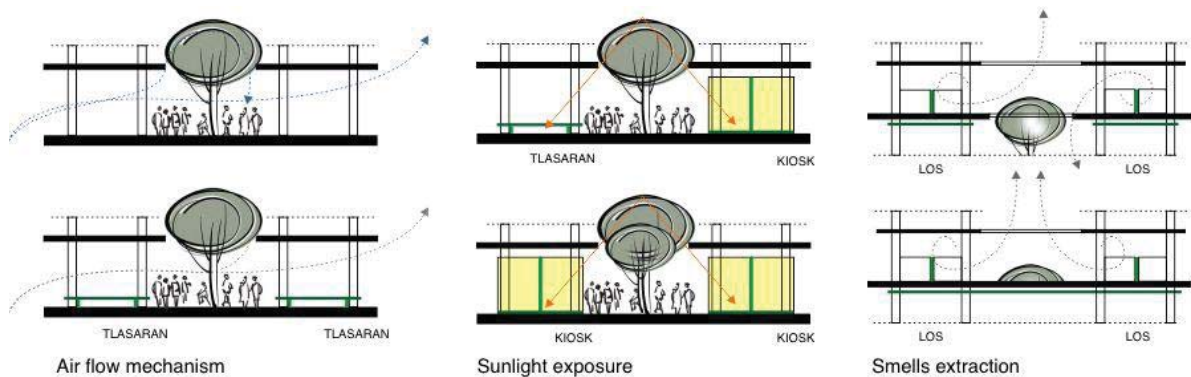


FIGURE 2. Immaterial aspects mechanism

## CONCLUSION

The findings of this study demonstrate clearly that immaterial aspects of the traditional market have an important role in producing a socio-eco tropical architecture. It also broadens the understanding of eco-tropical space as the creation of space, a certain type of place, or a certain type of tropical condition that can be experienced by the human body. As Hill [3] stated that immaterial architecture advocates an architecture that fuses the immaterial and the material, and considers its consequences, challenging preconceptions about architecture, its practice, purpose, matter, and use.

The atmosphere of place must be immaterial, which represents the intimate relationship between peoples, nature, and the built environment. Immaterial and material should weaves together as a conjunction, not opposition [3]. This study has added new insight that immaterial aspects are also important in transforming the traditional market from social-cultural back to the original form of the traditional market as tropical space as socio-eco tropical space.

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## REFERENCES

- [1] M. Carmona, Ed., *Public places - urban spaces: the dimensions of urban design*, 2nd ed. Amsterdam: Architectural Press, Elsevier, 2010.
- [2] J. Jacobs, *The death and life of great American cities*, Vintage Books ed. New York: Vintage Books, 1992.
- [3] J. Hill, *Immaterial architecture*, 1st ed. New York: Routledge, Taylor & Francis Group, 2006.
- [4] A. B. Gallion and S. Eisner, *The urban pattern: city planning and design*, 5th ed. New York, NY: Van Nostrand Reinhold, 1986.
- [5] I. Aliyah, "The Roles of Traditional Markets as the Main Component of Javanese Culture Urban Space (Case Study: The City of Surakarta, Indonesia)," *IAFOR J. Sustain. Energy Environ.*, vol. 3, no. 1, Apr. 2016, doi: 10.22492/ijsee.3.1.06.
- [6] I. Aliyah, B. Setioko, and W. Pradoto, "Spatial flexibility in cultural mapping of traditional market area in Surakarta (A case study of Pasar Gede in Surakarta)," *City Cult. Soc.*, vol. 10, pp. 41–51, Sep. 2017, doi: 10.1016/j.ccs.2017.05.004.
- [7] B. Hermanto, Suryanto, and R. M. Dai, "Identification of Traditional Market Characteristics and Modern Markets in Pangandaran District, West Java Province, Indonesia," *Adv. Sci. Lett.*, vol. 24, no. 1, pp. 365–368, Jan. 2018, doi: 10.1166/asl.2018.12010.
- [8] M. Wigley, *The architecture of deconstruction: Derrida's haunt*, 1. MIT press paperb. ed. Cambridge, Mass: MIT Press, 1995.
- [9] R. L. Gregory, *Eye and brain: the psychology of seeing*, Fifth edition. Princeton, New Jersey: Princeton University Press, 2015.
- [10] G. Verhaeghe, "Learning Architectural Design. Material and Immaterial Aspects," *Des. J.*, vol. 20, no. sup1, pp. S1140–S1153, Jul. 2017, doi: 10.1080/14606925.2017.1353057.
- [11] B. Bognár and K. Kuma, *Material immaterial: the new work of Kengo Kuma*, 1st ed. New York: Princeton Architectural Press, 2009.
- [12] J. Pallasmaa, *The eyes of the skin: architecture and the senses*. London : Lanham, MD: Academy Editions ; Distributed to the trade in the USA by National Book Network, 1996.
- [13] J. Berger, Ed., *Ways of seeing: based on the BBC television series with John Berger*, Repr. London: British Broadcasting Corporation and Penguin Books, 1990.
- [14] Y. A. Yatmo, "Street Vendors as 'Out of Place' Urban Elements," *J. Urban Des.*, vol. 13, no. 3, pp. 387–402, Oct. 2008, doi: 10.1080/13574800802320889.
- [15] M. Douglas, *Purity and danger: an analysis of concept of pollution and taboo*. London ; New York: Routledge, 2005.
- [16] M. Dodge, R. Kitchin, and C. R. Perkins, Eds., *The map reader: theories of mapping practice and cartographic representation*. Chichester, West Sussex [England] ; Hoboken, NJ: Wiley-Blackwell, 2011.