The transformation of the dimension of the meaning of traditional house joglo into a modern house

Sarmini¹*, Ulin Nadiroh² and Ani Wakidah Basriyani²
¹ Department of Pancasila and Citizenship Education, Faculty of Social Sciences and Law, Universitas Negeri Surabaya, Ketintang, Surabaya 60231, Indonesia
² Departement of Social Studies, Universitas Negeri Surabaya, Ketintang, Surabaya 60231, Indonesia

*E-mail: sarmini@unesa.ac.id

Abstract. Joglo is a traditional Javanese house in Indonesia. This traditional house is now beginning to be displaced by modern house models. However, the layout and meaning of traditional houses still exist that applied to modern house building. This study aims to reveal the transformation of the meaning of traditional Joglo house space to a modern home made in Yogyakarta, Indonesia. The method used is case study. Technique of collecting data through literature study, observation, and indepth interview. The results showed that the traditional Joglo house began to be abandoned and changed into a modern style house. Although the shape changes but the meaning does not just disappear. The meaning of traditional Joglo house space transformed both the form of function and its meaning. Home positioning is adjusted to environmental conditions for the sake of practicality and the aesthetic side. Additional space on the house is a garage, as a place to keep moving property for homeowners.

1. Introduction

Each culture produces works, in the form of tools, food, dance, clothing and buildings. One of the buildings is a traditional house. There are many traditional houses in the world, such as the Naga Hut wooden house in India, the Underground house in Tunisia, and the clay-based house, Bolgatanga painted village in Ghana. Indonesia as a multiethnic country also has many custom houses. Traditional houses include homes and custom homes Joglo in Java.

Various studies have been conducted regarding homes from an architectural, social, cultural and health perspective such as home studies from an architectural perspective [1,2], home study from a cultural perspective [3–7], study from a health perspective [8–11]. Study on the layout of traditional houses with various types [3,4]. Traditional house spatial is also inseparable from the culture of the community [4,5]. Culture of the community such as the power structure that materialized in the spatial homes [7].

Each traditional house has a room that can be accessed by anyone and some are not. There are spaces that are domestic but some are public [12]. The type of house can also represent the character of its inhabitants who are introverted or extroverted [3]. However, domestic space in housing in rural areas has changed with the changing socio-economic conditions of the community [12].

In recent years there has been a proliferation of writing about the meaning of homes in the disciplines of sociology, anthropology, psychology, human geography, history, architecture and philosophy [13]. Changes in the socio-economic conditions of an increasingly developed society, making traditional homes unable to accommodate the interests of the community. Therefore it needs to
be converted to a modern house [14]. In addition the traditional house layout is full of symbolic meanings can also be transformed into modern homes [15–17].

The governments of Asian countries are also seeking modern housing construction that can accommodate consumer desires. For example the spatial apartment in Korea who pay attention to the health side [8], lighting and aesthetic side [6], comfort in hot and humid climates and temperature stability [9,10]. In addition, there is also a study of the impact of adaptation on the meaning of homes for the therapeutic process for persons with disabilities [11] and examples of traditional houses [1]. Different studies focus on the continuity of the binary diatermal space of Balinese homes [18], And the synthesis of the traditional house [2].

The above studies examine the houses of the structure and spatial structure, in terms of health, consumer desires and aesthetics. Research on the transformation of the traditional house spatial to the modern house has not talked about the meaning of all the rooms intact so this paper raised about the transformation of the meaning of traditional Javanese house space to a modern house. This study focuses on the transformation of the dimensions of the meaning of traditional Joglo house space to a modern house made by citizens in Yogyakarta, Indonesia.

2. Method
The method used is case study (19). Data collection techniques through literature study, observation, and in-depth interviews. The literature study was used to obtain data on the standard rules of public spatial and domestic custom homes joglo along with its philosophy. Observation is used to obtain a direct description of the shape and division of traditional house space of joglo and modern house along with its utilization. While in-depth interviews are used to obtain data about the meaning of each room custom homes joglo and modern houses according to the community Kokap Village, Kulonprogo District, Province of Yogyakarta, Indonesia. The collected data is associated with modernization theory according to J.W. School is a transformation, a change of society in all its aspects. Then analyzed and interpreted descriptively to be drawn conclusion.

3. Results and discussion
Joglo traditional house is a traditional house of the Javanese tribe in central Java and Yogyakarta. In ancient times only belonged to the nobility of Surakarta kasunan, Yogyakarta Sultanate, royal officials and the rich.

3.1. Description of the spatial division of traditional house of joglo and modern house
The Joglo traditional house plan and the modern house of Javanese society can be seen in Drawing 1 and Drawing 2.

![Drawing 1. Joglo traditional house plan](image1)

![Drawing 2. Modern house plan in Yogyakarta](image2)
3.1.1. Joglo house

Joglo traditional house made of wood, requires a large area and reflects the local cultural values. This traditional house requires a large area, for the pavilion ideally sized between 4 x 6 meters to 10 x 15 meters and many uses Teak wood as a building material. The people of Java prefer the concept of modern house in the construction of his house in this modern era. Modern houses are more flexible in the spatial space and do not require large areas.

Joglo traditional house in general has a room plan as shown in Figure 1. Each room in Joglo custom house has its own function. The first room is kuncung / terrace serves as a place to watch the show for the surrounding community. This room is a public space as a transition area from the outside into the house. The second room is pendhapa / living room serves to receive guests lesehan / sitting on the floor mats. Pendhapa is a npublik space for receiving unknown guests or for meeting rooms in solving common problems. The third room is pringgitan / show room serves as a place of wayang kulit show. Pringgitan is sometimes also used to receive guests who are already known by the owner of the house.

The fourth room dalem / family room serves as a gathering place family and this room including the domestic area. This room is used to discuss important internal family issues, including scolding a child. Dalem in the form of a separate building that has three rooms that is senthong kiwa serves as a male bedroom, central senthong / krobongan as a sacred space to worship Dewi Sri (Goddess of Rice) and senthong tengen serves as a female bedroom. The next building is a gandhok that is beside the right and left dalem.

Gandhok kiwa contains three items, namely wooden crates, kenthongan from coconut tree trunks and crops. Timber crates are used to store property in the form of family gem gold jewelry. Kenthongan is used as a tool to announce everything through sound cues. Barns are large boxes used to store crops. Gandhok tengen located on the left side of the dalem building serves as a kitchen. Kitchen is a domestic area for women. All matters can be discussed in the kitchen by the women without the intervention of men. The rearmost building is a pekiwan located in the back corner, close to the kitchen serves as a bathroom and toilet. Pekiwan placed there because it is considered a dirty place.

3.1.2. The modern house

Modern house there are two types based on the maker, the modern house made by citizens and modern homes made by developers. Both houses have differences in the concept and the house plan. Modern home-made developers tend to be small in terms of size and the room layout is not so attentive to the local culture. Modern houses made by residents tend to pay more attention to local culture in arranging the spatial layout. Therefore, the transformation of the meaning of space from local traditional houses can be seen clearly.

The modern house referred to in this research is a modern home made by Kokap residents. This house in general has a room plan such as paada picture 2. Based on picture 2, Modern house building is an integral whole building, unlike the traditional house of Joglo consisting of several buildings. Modern house building consists of terrace, living room, two children bedroom, one master bedroom, living room, dining room, kitchen, prayer / worship room, bathroom and toilet, laundry and garage.

The terrace on the modern house serves as an outdoor living room. The next room is a living room inside the house, two children's bedrooms, and one master bedroom for both parents. The room is in the middle of the building is a family room that serves as a gathering place for families and to watch television. This room also serves as a place to discuss internal family issues, such as a place to scold children, family meetings, and receive guests who are very close to the family. The room behind the living room is a dining room that serves to entertain guests who are known and close to the family. The room at the back is a prayer / worship room. This room is public, if there are guests who are willing to worship are welcome to use it. The next room is the kitchen that became the area of female domination, although did not rule out the possibility of men using it.

The room that is generally still maintained its position is the bathroom and toilet. This room plus a laundry was placed at the back of the modern house. An additional room that had not been in Joglo's
house was a garage. This room is usually placed beside the right or left of the living room. Garage becomes a place to show the identity of homeowners by showing the wealth of moving objects, such as cars and motorcycles.

The selection of modern homes compared to Joglo houses is caused by several reasons, including modern houses more practical, development costs and maintenance cheaper, and have no specific rules. In terms of breadth, Joglo traditional house requires large areas and large because of the large number of buildings, while modern homes require only a smaller area. Although large, but the number of rooms in custom homes Joglo limited, while the modern house tailored to the needs. The use of every room in custom house Joglo adjusted to its designation, while the modern house tailored to the needs. Potential homeowners can be creative with the model and interior of the house in accordance with their own desires.

3.2. The transformation of the meaning of traditional house space joglo into a modern house
There are some shifts in the selection of houses, if the first many rules that bind to the construction of Joglo house, such as the selection of places, the house should be facing sideways from the road, should not back to the mountain / hill. In modern homes a troublesome rule is buffeted, people prefer a practical home. The transformation of Joglo's traditional house space to a modern home is as follows.

3.2.1. Kuncung/ the terrace switch functions into an outdoor living room
In front of his house pendhapa there is a public space that is public. The outer part is called kuncung / terrace is open room without roof. Kuncung is the public space as the transition area from the outside into the house. In today's modern homes the home terraces are transformed into an outdoor living room. On the porch of the house placed tables and guest chairs in small amounts. Terrace is public, commonly used to receive guests who have not known or just stop by.

3.2.2. Pendhapa becomes the living room
Pendhapa serves as a public space, in this room the host receives his guests. The shape of the pendhapa is generally square, where the square plan is always placed with long sides to the right and left of the house so it does not extend inward but extends sideways. Pendhapa is not just a place but has a deeper philosophical meaning, that is as a place to actualize a form / concept of harmony between the inhabitants with relatives and the surrounding community. The function of the philosophical meaningful pendhapa is now transformed in the form of living room in a modern house.

The living room of a modern house also serves as a place to receive guests and is public. The different things lie in its philosophical meaning. The living room is not only the place of actualization of the concept of harmony but becomes the place of homeowner actualization through the symbols displayed in the interior. The interior of the living room displays photos of homeowners and activities that become his hobby. It also displays the work of homeowners.

3.2.3. Dalem became a family room, bedroom and prayer room
Dalem is a private space (private), one function as a gathering space of all family members. The shape of this room is square with a wall surrounded on each side. The deeper into the interior of the Javanese tradition house, the more specialized (private). Dalem is the most important part in the house of Javanese tradition because in it there are three rooms or senthong. Senthong kiwa, senthong tengah (krobongan) and senthon tengen.

Senthong kiwa and senthong tengen as a bed together into a private bedroom, which is as a bedroom with family members according to gender. But in a modern house has been transformed into a bedroom that is owned privately or in accordance with the needs of its owner. In general, modern homes in the Kokap area have a number of rooms according to the number of family members.

Krobongan / sacred space replaced by a prayer / worship room. Krobongan as a sacred place for the inhabitants of the house of Javanese tradition is closely related to the myth and belief of the agrarian society of Java against Dewi Sri. Dewi Sri who symbolizes fertility and happiness in the household is
very close to the life of Javanese society. Dewi Sri is a fertility goddess who plays an important role in determining the welfare of agrarian society (the farmers) in order for his business smoothly. *Krobongan* is a room that is always empty, but complete with beds, mattresses, pillows, and bolsters and can also be used for the first night for newlyweds. *Krobongan* belonging to the Yogyakarta nobility, usually contains various objects of symbol (equipment) which have a unity of sacred meaning.

While *krobongan* in the first contains a bed that is used to sleep the owner of the house. Inside the *krobongan* also stored various heirlooms such as spears, kris and the magical objects of grandparents. The various objects in *krobongan* differ between the nobility and the peasants but both have the same meaning, namely the symbol of fertility, the happiness of the household whose embodiment is Dewi Sri. So *krobongan* is a sacred place that has the same meaning although different contents. In modern homes, *krobongan* changed into a place of prayer or worship to God Almighty. The place of prayer or worship is adapted to the religion and beliefs of the homeowners.

3.2.4. *Loss of Pringgitan function*

Space that still functions as a public space is the transitional space from the *pendhapa* to the *dalem* called *pringgitan*. This room serves as a place to hold a *wayang kulit* show at certain events. In accordance with technological developments, religion and beliefs of the people of Yogyakarta then the pringgitan has lost its function. Therefore, the pringgitan has disappeared and turned into a prayer / worship space according to the religion and belief of the owner.

3.2.5. *Pekiwan* / toilet is still maintained its position

*Pekiwan* a room that contains the toilet as well as functioning as a bathroom located behind the *dalem*. "... this house is facing west, so the well and the toilet are in the back corner of the southeast ... actually as long as the rear corner is near the kitchen, it does not have to be southeast ..." (Pardjiyem, 78). A similar opinion was also shared by Marwan: "... it is not proper if the toilet is in front, as it should be held ..." From there it was ... "(Marwan, 70 years). So the location of *pekiwan* / toilet modern homes made in Yogyakarta residents are still placed in the back corner.

3.2.6. Reduced *gandhok* function

*Gandhok* is a back room that extends on the side of dalem ageng and pringgitan function as a place to store wealth in the form of produce and kitchen. The room at the back is called a *gandhok* extending to the left and right of *pringgitan* and *dalem*. The room is separated from the main room, especially from the room that is sacred / sacred for its inhabitants.

*Gandhok* in the past there are two on the right and left *dalem*. *Gandhok* on the left contains three items, namely wooden crates, *kenthongan* from coconut tree trunks and barns. Timber crates are used to store property in the form of family gem gold jewelry. *Kenthongan* is used as a tool to announce everything through sound cues. Barns are large boxes used to store crops. While the gandhok on the right serves as a kitchen. In modern homes, gandhok transformed into a kitchen only. The function of gandhok as a treasure chamber is now lost.

3.2.7. *House positioning based on aesthetic value, situation and condition*

Based on the story of Pardjiyem (70 years), the house should not be back to the mountain because it is feared the inhabitants will experience a hard life. Heavy life in question is the difficulties that will be experienced by residents of the economy, health and safety. For example if a landslide disaster does not know it quickly. However, Ari Widiyatno (31 years old) has a different opinion. He states "... if I am happy to face the street, the house faces the road more comfortable and practical (Ari Widiyatno, 31 years old).

The same thing is also put forward by Suyatno (59 years), in terms of practicality becomes a priority. He is not only fixated on the rules of the layout of traditional house Joglo in the making of the house. Something that is not contrary to norms and values can still be hit. Provided it has a good aesthetic value. In line with Ari and Suyatno's thoughts, Hanjar Prihatno, (33 years old) also chose a house facing the
highway instead of having to avoid a backwash position. ". . . if you want to park the vehicle so hard, the garage looks weird . . ." (Hanjar Prihatno, 33 years). He also thought of the aesthetic side. ". . . Now this model carport in front . . ." (Hanjar Prihatno, 33 years). So the consideration of the position of a modern house in the mountainous area of Kokap no longer uses Java rules but prefers aesthetic and practical sessions.

3.2.8. Garage as a storage place of movable property
At Joglo custom house, vehicles owned by home owners either in the form of bicycles, motorcycles and cars can be placed in the environment around the house that has a large yard. In the modern house the land area for the house is very limited, therefore the garage is needed when having enough movable property. The location of the garage is generally located on the right or left side of the modern house building.

Javanese culture in ancient times calculate a person's wealth based on the land area he has. But now this wealth of a person can be seen through their moving possessions, such as motorcycles and cars. Ownership of motorcycles and cars in large quantities in Indonesia is a fairness. This is also triggered by the need for personal transportation because public transport in Indonesia has not been able to meet most of the needs of citizens. Almost all houses have motor vehicles, so garage is necessary.

4. Conclusion
Every room in Joglo custom house is full of meaning that depict Javanese culture. When the era is more modern, Joglo traditional house began to form many abandoned, change the modern style. Although the shape changes but the meaning does not just disappear. The meaning of space Joglo custom house undergoes a transformation both the form of function and its meaning.

The terrace that used to function as the connecting area between the outer area and the inner house turned into an outdoor living room. Pendhapa still serves as a living room, it's just has a shift in meaning as a means of self-actualization of the owner. Dalem as a domestic space turned into three rooms that have different meanings. The third room is a family room, bedroom and prayer room / worship. Pekiwan still maintained both location and function. Gandhok turned into a kitchen but its additional function as a treasure store has been lost. Pringgitan has been lost because it does not work anymore as technological developments and religion / belief homeowners. Home positioning is adjusted to environmental conditions for the sake of practicality and the aesthetic side. Additional space in the house is a garage, as a place to store a hart of moving goods.

5. Acknowledgment
I thank many people Kokap Kulonprogo District, Province of Special Region of Yogyakarta, Indonesia, who has been willing to provide information and data needed in this research and friends Unesa class graduate Social studies P2TK 2015 for its cooperation, moral assistance, suggestions, and criticism that builds.

6. References
[1] Chiou S C and Krishnamurti R 1996 Example Taiwanese traditional houses Environ Plan B Plan Des. 23(2) 191–216
[2] Tyng A G 1991 Synthesis of a Traditional House with a Space-Frame Int. J. Sp. Struct. 6(4) 267–73
[3] Orhun D, Hillier B and Hanson J 1996 Socialising spatial types in traditional Turkish houses. Environ Plan B Plan Des 23(3) 329–51
[4] Osman K M 1996 Spatial and Cultural Dimensions of the Houses of Omdurman Sudan Hum Relations 49(4) 395–428
[5] Yan M C, Lauer S and Riaño-Alcalá P 2017 Incorporating individual community assets in neighbourhood houses: Beyond the community-building tradition of settlement houses Int. Soc.
Work 60(6) 1591–605

[6] Choi K-R and Yu C 2011 Sustainable Design for Asian Housings: Traditional Culture, Lighting and Aesthetics Indoor Built Environ 20(5) 485–7

[7] Choi Y K 2003 The spatial structure of power: Traditional villages and houses in Korea Environ Plan B Plan Des 30(4) 589–603

[8] Lee Y, Jang M and Ahn C 2012 Health Promoting Spatial Design Characteristics of Korean Apartment House in a User-Benefit Perspective Indoor Built Environ 21(4) 524–40

[9] Toe DHC and Kubota T 2015 Comparative assessment of vernacular passive cooling techniques for improving indoor thermal comfort of modern terraced houses in hot-humid climate of Malaysia Sol Energy 114 229–58

[10] Makaka G and Meyer E 2006 Temperature Stability of Traditional and Low-cost Modern Housing in the Eastern Cape South Africa J Build Phys 30(1) 71–86

[11] Hawkins R and Stewart S 2002 Changing rooms: The impact of adaptations on the meaning of home for a disabled person and the role of occupational therapists in the process Br. J Occup Ther 65(2) 81–7

[12] Mughal MAZ 2015 Domestic Space and Socio-spatial Relationships in Rural Pakistan South Asia Res 35(2) 214–34

[13] Mallett S 2004 Understanding home: a critical review of the literature Sociol Rev. 52(1) 62–89

[14] Li X, Li H and Wang X 2013 Farmers’ willingness to convert traditional houses to solar houses in rural areas: A survey of 465 households in Chongqing China Energy Policy 63 882–6

[15] Makachia PA 2011 Evolution of urban housing strategies and dweller-initiated transformations in Nairobi City Cult. Soc. 2(4) 219–34

[16] Pulhan H and Numan I 2006 The traditional urban house in Cyprus as material expression of cultural transformation J Des Hist 19(2) 105–19

[17] Magnuson E 2005 Cultural discourse in action: Interactional dynamics and symbolic meaning Qual Sociol 28(4) 371–98

[18] Subroto T Y W and Malangyudo A S 2014 The continuity of binary diametric space of Balinese house in Yogyakarta Indonesia City Cult Soc. 5(1) 33–42

[19] Miles M B and Huberman A M 1994 Qualitative Data Analysis, In: Qualitative Data Analysis: An Expanded Sourcebook Sage Publications p. 278