

Changing Meanings of Hearths in Vernacular Highland Houses in Indonesia

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Abstract

Hearths belong to the initial elements of housing construction. The earliest hearths were used as cooking appliances and ritual utensils (symbolic meanings). In tropical highland regions, many houses are still equipped with hearths. At present, the use of the hearths no longer has merely symbolic meanings. The change in the hearth functions has transformed the meanings of space in a houses. This study reveals the transformation of the meanings of hearths in tropical highland housings.

A qualitative method was employed with a case study. The objects of the study include twenty-four highland villages in Wonosobo and Banjarnegara regencies of the Central Java province of Indonesia. Data were collected using observations, documentation and interviews. The study found the transformation of the meanings of hearths to be functional and social meanings. The symbolic meanings are still maintained by a small number of societies. The factor causing the transformation of the meanings of hearths is advances in technology and modernism. Such transformations will exert an influence on room layouts in the highland housings. A paradigm shift of the highland societies affects the architectural designs of the highland housings.

Keywords: transformation, hearths, highland, housing, modernism

Introduction

A hearth is a place for a fire to burn. At first, the hearth was used for cooking. The hearth was first discovered in the open air. A study conducted in the Brazilian highlands found that outdoor hearths were used for cooking. Two small hearths were discovered around houses (De Souza, 2018). In the Gullah-Geechee settlement around America's coastal regions, outdoor hearths used for cooking have also been discovered (Botwick, 2018). Such hearths were used not only by occupants of the houses but also by neighbors regardless of their kinship relationships (Bird *et al.*, 2016). In addition to cooking, the hearths were used for ritual utensils. Archeologists have discovered outdoor hearths in Mexican settlements that were utilized for a grand ceremony (Farahani, Motamed and Ghadirinia, 2018). Besides the outdoor hearths, indoor hearths used for rituals have also been found (Dussol, Sion and Nondédéo, 2019). The rituals were characterized by the marble coating of the hearths. The hearths have also served as a unifying force for noblemen. They were utilized by noblemen as points to interact with each other and to gather to discuss the unity of the group (Craske, 2016). In the absence of electricity, the hearths presented themselves as the only indoor light source, and therefore they became the

center of many rituals (Doubrawa, 2008). The hearths were also believed by the society to have holy guardian spirits. The Shan society in Myanmar considered that the hearths had a holy element known as phi phai (Oranratmanee, 2018). In the Agacbekler house in Edirney of Turkey, the hearth was forbidden to be placed in the same orientation as the qibla (the direction of prayer in a mosque) (Erdoğan, 2017). Along with modernism, the hearths are disappearing and are being replaced by modern kitchens. However, the condition of a modern kitchen is not as wide as a traditional kitchen (Nuraeny *et al.*, 2021). Interaction with family can be achieved when the kitchen has a large size. The tradition of gathering in the kitchen is a form of culture in mountainous areas. The socio-cultural system formed in an environment will maintain existing traditions (Rudwiarti, Pudianti and Adiwinata, 2021).

At present, hearths can be found in most highland housings in Indonesia. In highland housing, the hearths exist due to the cold climate of the highland (Hermawan and Prianto, 2018). Indonesian people from the lower economic class still use fireplaces as cooking tools, both in the highlands and in the lowlands. The use in the lowlands as a means of heating is different from the fire in the lowlands which is only used for cooking (Hermawan *et al.*, 2017). The three components have formed hearth-based room layouts in the housing. This is following a study conducted in houses of Meybud, Iran, which revealed that the patterns of housing in Meybud have been shaped based on three components comprising two components of the environment (the climate and the natural context) and human (social norms) (Danaeinia and Hodaei, 2019). Climate will affect the behavior of building users in determining building materials. In houses in the highlands, vernacular houses use walls made of wood or stone. Building users feel that the use of these materials provides comfort for them (Hendriani, Hermawan and Retyanto, 2017).

Most highland housing have wood-burning hearths, electric hearths, or gas hearths. Houses in Stubik of Eastern Serbia have two hearths placed in the wings. Both hearths have two chimneys (Pejković, 2016). Houses with two separate hearths were also found in artifacts in several locations (Grøn, 2018). Almost all of the housing in Ljubljana, Slovenia are equipped with hearths. They can even be found in every room (Škvor Jernejčič and Vojaković, 2020). A hearth placed in a bedroom is used to provide warmth (Brisibe, 2016). The placement of hearths within rooms at housing varies. Evidence indicates that Neanderthals built hearths in a space closed by the door (Slimak, 2019). Open hearths are often found not only in single-story houses but also in double-story houses (Mileson, 2015). A hearth is often surrounded by furniture. The principal room in which a hearth is placed, termed *cegin* in Welsh, is equipped with furniture (Bebb, 2014). The hearth has a stone chimney (Chappell, 2018). It indicates social status. The lowest social status is associated with the centrally placed hearth, while the highest social status is seen from the placement of hearth separated from the house (Clark, 2013).

A hearth has been an important element for advances in social science and architecture. Currently, there has been a phenomenon of transformation in the use of hearths due to the advances in technology and modernism. Such advances lead to a change in the life pattern of society. For example, the transformation of an area to be a tourist object will influence the thinking pattern of the society adaptable to tourists' intentions. Tourists' tendency not to be able to stand the smell of smoke from a wood-burning hearth will cause society's avoidance of the hearth. The tourists as an outgroup who has a concern about their health believe that smoke can lead to health impairments (Akintan, Jewitt and Clifford, 2018). Both advances in technology and modernism will eliminate the tradition of the locality. Vernacular architecture will change over time. Each change has its own reasons. Change can lead to a change in the meaning of life (Jagatramka, Kumar and Pipralia, 2021).

The present study investigated the transformation of the meanings of the hearths in vernacular highland houses and its influence on the social concept.

Table 1. Review of Theories of Fireplaces
Source: Author

Theory of Fireplace	Discussion	Condition tropical regions
The First of Architecture (Vitruvius)	Fireplace is an element of architecture the first time as a protection function against the natural	function of the fireplace in the two seasons is not for protection so that the theory can not answer for the area two seasons mainly lowland
Primitive Hut (Marc Laugier – Antoine)	Architectural forms are associated with the meaning of union with nature (ecology). The discussion of wood material as a building material for houses can be used as a reference in research studies. The use of a fireplace in a wooden house will make the wooden house warmer.	The discussion of the theory is only limited to the theory of the formation of houses in the past. The fireplace discussion has not been in detail and has not been discussed in the functional realm. In the tropics, primitive houses also use wood. The fireplace used will add to the warmth.
Four architectural elements (Gottfried Semper)	Making the fireplace as one of the four architectural elements so that the fireplace is Believed to be the beginning of architecture.	Fireplaces are the main element of protection with fireplaces and earthen mounds, while homes in the tropics make fireplaces not an element of protection.
Primitive place type (Simon Unwin)	Fireplaces have been studied from a functional element, social and symbolic. It has not been associated with the discussion of changes in function and meaning.	The study has not seen any changes in the function of the fireplace after the change in time. A four-function study needs to be done in the tropics.
Architecture Evolution (Norman Crowe)	Theory has shown the factors that cause changes in the architecture that can not be separated from the hearth past.	The study of changes has not been discussed in detail the relationship between the fireplace and its architectural form. Changes in the function and meaning of fireplaces before and after technology occurred in the tropics.

Table 2. Research Results on Residential, Local and Fireplace
Source: Author

Research Results	Discussion	Review of research result
Customs and beliefs of the indigenous village community of Saga Regency Ende, Flores makes gotong royong still maintained	Research has found that symbolic elements can be the basis for strengthening socio-cultural relations.	There has been no discussion of other elements other than adat.
The chemical elements produced by wood-fired fireplaces of different types are detrimental to health	Emphasizing that wood-fueled fireplaces have a negative impact on health.	There is no discussion about the social value of the fireplace function
Pawon usually private. However, the Kudus house is semi-public. Pawon can also be used as a family	Pawon can be considered as a fireplace room that can be a	There has been no in-depth discussion of the fireplace. The study of Pawon is only

gathering place, for eating, and also partially used as a kitchen	place for gathering and is semi-public.	limited to the simple function of
Carbon Monoxide (CO) and particulate matter (PM 2.5) in the space around the fireplace which is quite high and disturbs health	Pollution in the area around the fireplace is known for certain pollutant substances	There has been no discussion of the social value of
Joglo House not only functions as a protector but is understood as a manifestation of ideals and views of life	Discussion on practical and symbolic functions so that it is more comprehensive.	Not explained about the fireplace. Just explaining the laying of the wasp
The orientation of Madurese houses elsewhere is also based on the cosmological values held by the Madurese	Discussion on local values and symbolic values	Not explained about pawon and fireplace
Curiosity and social care are characters that need to be developed in order to create high social value	Research is able to explain the characters that need to be possessed in order to create good social values	Does not discuss heart-based characters
The concept of spatial layout in Bali is related to socio-cultural characteristics and community belief systems	Research explains the social and symbolic values associated with the concept of residential layout.	There is no detailed discussion of the fireplace, only discussing the placement and addition of the kitchen
Taneanas a social space for the Madurese community, even though it is in a new area. The kitchen is also used for mutual interaction	Research has resulted in a shared interaction space that is able to make better interactions. The	Discussion on the kitchen is not yet detailed, only whether there is an exit from the kitchen or not. The
pattern of the Madura Tanean Lanjhang dwelling house only has 1 main house due to the land	Research has residential patterns that can create mutual interactions.	Discussion of new kitchens on size and dividing walls.
Types of fuel in fireplaces cause different types of pollution	Research is able to explain differences in pollution obtained from the fireplace	Discussion of the value of the fireplace has not emerged
Spatial patterns in local houses have traditional arrangements related to size, structural systems, construction details, and decorative elements. In addition, there are changes in modern materials for floors, walls and roofs	Spatial research has been linked to local aspects.	Discussion of the kitchen is only in its placement
Room around the fireplace in the middle of the house to follow the dynamics of a duality of gender in the culture of Sumba	Research conducted has touched the fireplace and the cultural characteristics and make the fireplace as the heart of the	Residence's discussion fireplace due to changes in technology there is no
Village Kaenbaun on the island of Timor is a vernacular village, designed and built by the village founders based on local knowledge and wisdom. However, there are changes that occur in Lopo's spatial layout so it is necessary to create a concept to maintain vernacular authenticity	study discusses the preservation of local architecture which is important to carry out.	The discussion of the kitchen is only on function. Umebubu is a kitchen, a room for storing groceries, preparing food and a bedroom for women and children.

The typology of traditional houses in Wana Village is related to 3 systems, namely the environmental, building, and human systems which are infused in the form of settlement arrangement	. The kitchen discussion has been carried out.	The discussion of fireplaces is brief and not detailed.
The results illustrate that wood burning fireplaces are a potential source of indoor air contaminants, especially ultra-fine particles	The study explained the decrease in air quality caused by the fireplace. The	The study did not link the fireplace to technological changes.
The spatial arrangement of the Sembau House is heavily influenced by basic needs, beliefs and values, privacy, family, women's position, social relationships, and the human life cycle (marriage, birth, and death)	Research explains social values in influencing spatial orders.	Discussion of the fireplace is incomplete
This traditional house is the place where the rituals of the Jailolo community of West Halmahera are carried out. The Sasadu traditional house is located in Taraudu Village, West Halmahera Regency. The construction of the sasadu traditional house is erected directly on the ground.	Research explains spatial planning associated with symbolic meaning	Discussion of fireplaces has not been linked to technological changes
Firewood or synthetic logs are sources of exposure to particles in space; However, positive associations were only observed for synthetic log burn, which was stronger for longer exposures, adult exposures, and those with multiple enzyme variant genotypes	Research shows the effect of fireplaces on health.	Discussion of fireplaces has not been associated with changes in technology. The
the architecture of traditional houses in Keputihan Village still follow the rules inherited from their ancestors, but some have undergone changes, for example, the floors that have been walled and tiled already use asbestos and zinc, and are no longer used. have another granary and bale deliberation	The discussion of the kitchen has come to functional and health. The kitchen is not in the house related to health to avoid "sawang"; dust or black smoke that usually sticks to the ceiling.	The discussion of fireplaces has not been associated with technological changes

Research Method

A qualitative method was employed with a case study of twenty-four highland villages in Wonosobo and Banjarnegara regencies of the Central Java province of Indonesia. The villages are situated above 1,000 m.a.s.l. Three strategies used in the study were direct observations, documentation, and interviews. The three data collection strategies follow the reason for data validation among three data sources (Creswell and Poth, 2013). The collected data were then analyzed by recording data and highlighting certain information of description, reducing code into the theme by identifying the patterned regularity, connecting categories to analytical frameworks in literature by contextualizing with frameworks from literature, displaying and reporting the data by presenting findings in the form of figures and comparing cases.

The Vernacular Settlements in Highlands

Most societies in highland villages make use of hearths to keep them warm (Hermawan, Prijotomo & Dwisusanto, 2020). The types of hearths they use vary. Those who do not have indoor hearths often make use of outdoor hearths. This demonstrates that the use of indoor hearths is inseparable from the discussion of the use of outdoor hearths. The use of hearths in several highland locations provides varied descriptions from the types, the functions, and the elements of hearths based on some factors of the advances in technology and modernism. The distribution of research locations is presented in Fig. 1.

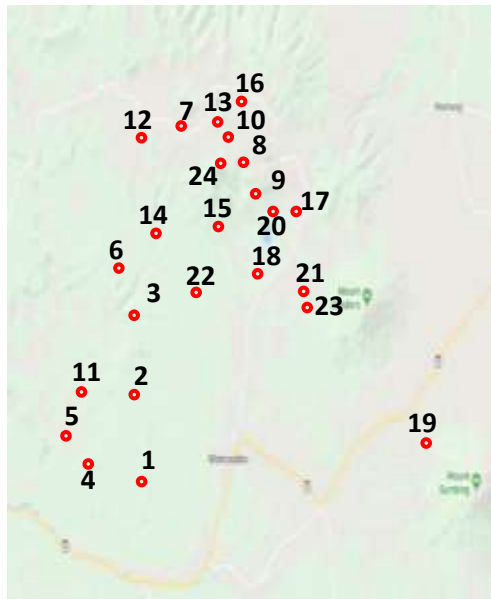


Fig. 1: The Map of the Research Locations
Source: google map






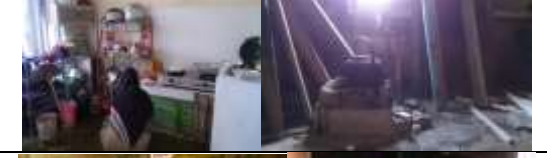



Annotation:

- | | | |
|---------------------------|-------------------------|--------------------------|
| 1. Lumajang Village | 9. Tieng Village | 17. Surengede Village |
| 2. Wonokampir Village | 10. Jojogan Village | 18. Kreo Village |
| 3. Mutisari Village | 11. Binangun Village | 19. Kledung Village |
| 4. Gumawang Kidul Village | 12. Batur Village | 20. Tegalarum Village |
| 5. Wonosroyo Village | 13. Dieng Kulon Village | 21. Buntu Village |
| 6. Kalidesel Village | 14. Campursari Village | 22. Slukatan Village |
| 7. Karangtengah Village | 15. Sembungan Village | 23. Gunung Alang Village |
| 8. Parikesit Village | 16. Dieng Wetan Village | 24. Siterus Village |

Table 3. Description of fireplace in 24 village

No	House	Description
1		People in Lumajang Village already use modern equipment, such as gas stoves and magic com.

2		You can see some furniture in one of the people's houses in Wonokampir Village which is modern, but there are also traditional utensils in the kitchen.
3		People in Mutisari Village cook using a gas stove but warm themselves using a traditional stove.
4.		Some residents in Gumawang Kidul Village are warming themselves using wood-fired stoves, but they already use gas stoves for cooking.
5		Residents in Wonosroyo Village still use wood-fired stoves for cooking.
6		People in Kalidesel Village still use traditional utensils and look simple.
7		People in Karangtengah Village have a way to warm their bodies in the cold air, with stoves and gas stoves.
8.		Residents in Parikesit Village warm themselves using coal stoves and cook using a gas stove.
9.		The people of Tieng Village still use fireplaces but have also used modern technology such as magic coms, gas stoves.
10		People in Jojogan Village are already using modern tools such as magic coms and gas stoves.
11		The people of Binangun Village themselves have two ways of making/processing rice into rice: traditional stoves and magic coms.
12		People of Batur Village are already using modern gas stoves, but there is still a wood-burning stove.

13		In Dieng Kulon Village, modern cooking utensils such as gas stoves are used, but they still use a fireplace such as a stove.
14		People in Campursari Village still use traditional tools in their kitchens, but there are also gas stoves.
15		Residents in Sembungan Village cook using modern tools such as gas stoves but still use wood stoves.
16		People in Dieng Wetan Village cook using modern equipment such as gas stoves and magic coms.
17		People in Surengede Village still cook using wood-fired fireplaces.
18		Kreo Village people already use gas stoves for cooking, but there are still wood-fired fireplaces
19		Ways to warm themselves and cook People Kledung Village is using traditional tools in the form of a coal stove
20		Tegalarum Village people still cook using traditional firewood fireplaces
21		People in Buntu Village still use traditional equipment, namely wood-fired stoves
22		People in Slukatan Village still use traditional utensils, namely stoves.

23		Kitchens in Gunung Alang Village itself have wood-burning stoves that are still in use.
24		Siterus Village People use gas stoves and wood-fired stoves for cooking.

Findings and Discussion

The results of the study were based on observations, documentation and interviews with informants. Modern thinking patterns will change and even eliminate the use of hearths since modern society prefers practical things. The activities involving the use of hearths such as starting the fire and keeping the fire burning are not practical since they require more time and energy. In some villages, most dry fields were transformed into agricultural land to plant snake fruit, vegetables, sweet potatoes, corn, and tobaccos, and therefore firewood is difficult to get. The change in agribusiness also leads to the use of hearths in the social life of the villages. The use of information technology also affects the use of hearths in the social life of the villages. Before TV, the society gathered either indoors or outdoors to have a chat around a burning hearth. At present, some societies prefer watching television to gathering around a hearth. For highland societies, the gathering can be done while warming themselves using a hearth. Some societies currently have abandoned hearths due to the emergence of technology in social life. Besides, the types of hearths have changed along with the advances in technology and modernism. The use of a gas stove to substitute the use of a hearth is seen in Fig. 2. This condition happens in all study areas on the twenty-four research objects.

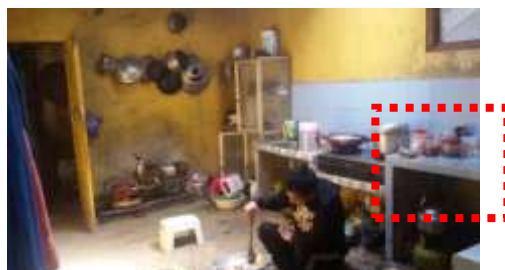


Fig. 2: The Use of a Gas Stove by Society

Source: author

Hearths are believed to have symbolic meanings from the very beginning of their existence. In the Middle Ages, symbolic elements of hearths were found out in a study. The study mentioned that there was a belief about ash-covered coffins and hearth cleaning. Both are believed to prevent the troubled dead from coming back home and looking from the hearth warmth (Reed, 2019). For most societies living in highland villages in Wonosobo and Banjarnegara regencies, the symbolic elements of hearth have disappeared. Only a few societies, particularly those living in Kalidesel village, believe in the symbolic meanings of hearths. On certain occasions, a hearth is used as a ritual utensil to wish for the safety of the occupants by burning *kemenyan* (incense made from the *Styrax benzoin* tree) in a hearth room. The hearth laid straight ahead from the front door is believed to give wealth in abundance. The burning of *kemenyan* for a ritual is shown in Fig. 3. This condition often occurs in highland villages, especially in the twenty-four objects.

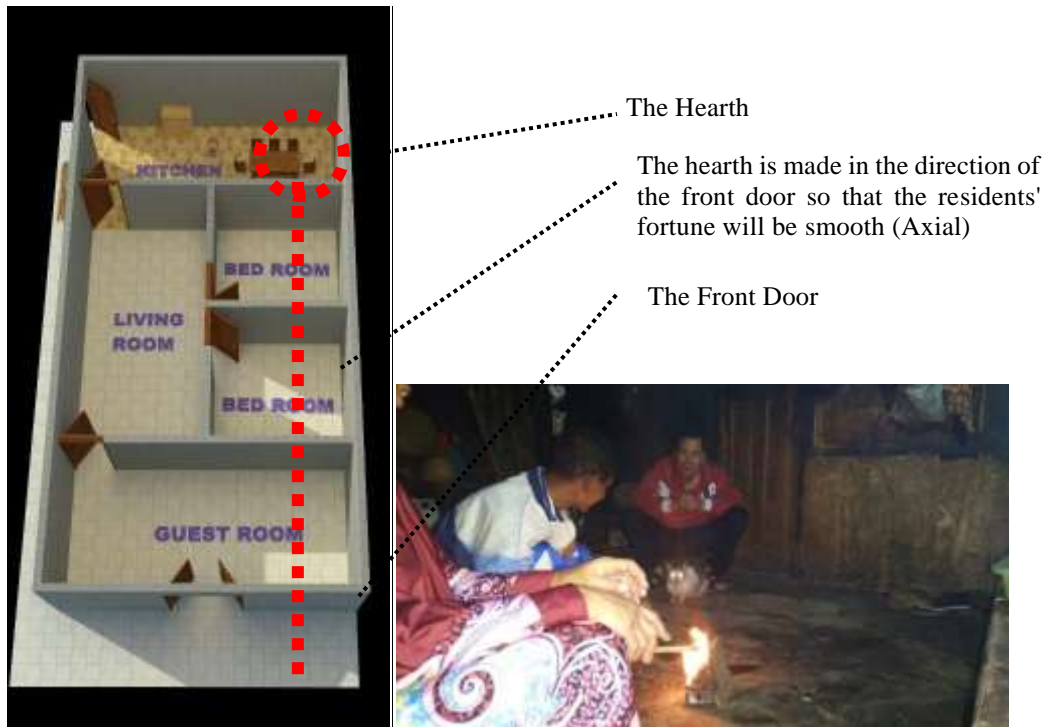


Fig. 3: a. Axial of the hearth and the front door, b. The Burning of *Kemenyan* in a Ritual in a Hearth Room

Source: author

The highland societies who still use wood-burning hearths make the hearths the center of activities. The societies of research object (Indonesia highland) consider that a room in a building is like a human blood circulatory system in which chimney functions to get rid of smoke like a trachea. A hearth is located in a living room for full-day social activities. The room is also used for daily social activities of the occupants, and therefore it is called the heart of the house. This is in accordance with conditions in Germany territory (Jütte, 2016). The use of a hearth is closely related to the economic aspects of a society. Most societies that use hearths belong to a lower middle class. Some people at Wonokampir, Lumajang, Mutisari, Gumawang Kidul, Wonosroyo, Kalidesel who use fireplace are a lower middle class. They consider that the use of hearths can save money for fuel can be found in nature. Firewood, fuel for hearths, can be collected through *repek* (picking up fallen sticks from the ground by taking a walk to their dry field and bringing them home). The sticks are gathered little by little. Mr. Sudarmiyatno, an informant from Binangun village, told that *repek* is done from one generation to another generation.

A long time ago, parents invited their sons to go to their dry field to teach about working. On the way to their dry field, they often found fallen sticks on the ground. Either father or mother picked up and brought them home. They did it almost every day so more sticks could be gathered. Arriving home, they put the sticks either beside or behind their house. The less dried sticks were put above or around a hearth. The sticks have been used as the fuel of hearths. A wood-burning hearth is situated in a hearth room (kitchen), most of which are not equipped with ventilation (some houses in Village of Buntu, Slukatan, Gunung Alang, Jojogan). In some hearth rooms at Kalidesel Village, roof ventilation is installed. Many houses with a hearth are equipped with roof ventilation to release smoke. However, ventilation is less effective to release the smoke which causes the hearth room to be dirty. A wood-burning hearth and roof ventilation can be seen in Fig. 4.



Fig. 4: A Hearth Room, a) A Wood-Burning Hearth, b) A Roof Ventilation in Kalidesel Village
Source: Author

Advances in technology as shown in the presence of electric hearths have affected some societies in Parikesit village. They, especially youngsters, consider that wood-burning hearths are un-moveable. They use an electric hearth since it is easily obtained and it can keep the room clean. Electric hearths can be moved according to the needs. When a guest visits the house, the hearth can be moved to the living room. When the occupants watch television, the hearth can be moved to the family room. Also, when an occupant needs the hearth to keep him warm, it can be moved to the bedroom. Lutfi, one of the informants in Parikesit village, mentioned that the use of the electric hearth is flexible since it is adjustable and moveable.

Advances in technology has lead to an ease of movement. The transformation of the use of wood-burning hearths to the use of coal-burning hearths and electric hearths occurs due to the ease of obtaining fuels and of adjusting the position. The transformation occurs in some societies in some villages. In houses of village officials in some villages, hearths are no longer used since they can make the room in which they are located dirty. The Village Head of Campursari said that hearths cause walls and roofs to be dirty and the smoke produced by the wood burning can lead to asthma or other health effects. In line with the Village Head of Campursari, the Village Heads of Wonokampir, Mutisari, Sembungan, Plemburan, and Wadasputih agreed to eliminate wood-burning hearths. A dirty room as the impact of hearths is shown in Fig. 5.



Fig. 5: A Dirty Room because of the Impacts of Hearths in Parikesit Village
Source: Author

The fact that wood-burning hearths can cause a room to be dirty and the smoke can lead to health effects encourages some people in Indonesia highland to convert to another type of hearths. The burning wood emits a notable amount of carbon dioxide. Green space should be initiated for a healthy society. A carbon footprint is defined as the amount of carbon dioxide emitted either directly or indirectly by a person's daily activities (Setyowati *et al.*, 2019). Therefore, some communities in Dieng Kulon, Dieng Wetan, and Karangtengah converted wood-burning hearths to gas-fueled hearths. The gas-fueled hearths are products assembled by Tifal, a young man living in Karangtengah. At present, many people try to assemble their gas-fueled hearths. Tono, one of the informants from Karangtengah village, explained the use of a gas-fueled hearth of which shape is similar to a kerosene stove. The shapes of gas-fueled hearths

vary. A gas-fueled hearth having the same shape as a kerosene stove is preferable since it can be used to boil water. Despite the absence of wood-burning fire, the gas-fueled hearths can be used to provide warmth and boil water at the same time. A gas-fueled hearth can be seen in Fig. 6.



Fig. 6: A Gas-fueled Hearth in Karangtengah Village

Source: author

Some communities living at the slope of mountains have begun to change the use of hearths along with the emergence of modern thinking patterns. Some of them think that the smoke produced by the wood burning causes their houses to be dirty. Despite the elimination of a wood-burning hearth, such supporting elements of a hearth as *dingklik* (small table) and *jengkok* (small stool) remain in some houses. A hearth room still functions as a place to gather despite the absence of the hearth. Kinship ties involve not only relatives but also neighbors. Fiqi, one of the occupants of a house without a hearth, explained that communities, particularly older age groups, can still interact with each other without keeping their bodies warm using a hearth. However, this culture of interaction does not apply to younger groups influenced by information technology. Advances in mobile phones trigger less willingness to interact directly. Such a pattern of life will eliminate the culture of interaction around a hearth among young generations and diminish the value of kinship. The interaction between occupants and neighbors is shown in Fig. 7.

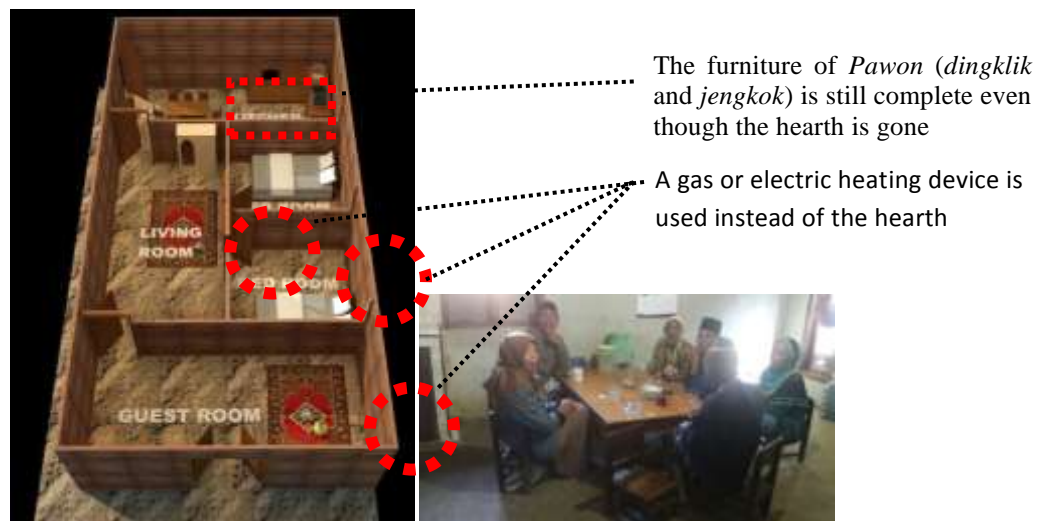


Fig. 7: a)Transformation of The Hearth, b)The Culture of Gathering without a Hearth in a House in Plemburan Village

Source: Author

A social approach can be a medium to preserve both culture and architectural sites. Architecture can also be medicine to cure social problems and environmental challenges (Idham, 2018). A house can have different meanings for different persons. It can be a place for

human habitation, amusement, relaxation, sleep, hospitality, and pride. The characteristics of a house in a region represent the characteristics of the occupants (Ekhaese, Amole and Izobo-Martins, 2018). In some houses in other regions, a hearth room (kitchen) is regarded as a women's room. Women play an important role in the use of the room. In Kampung Jajan of Semarang, women are responsible for transforming a house into a place to cook and prepare food (Murtini *et al.*, 2019). A hearth room in highland houses is not merely for women because the interaction between the occupants and the neighbors is not done only by women.

To support its function, a house is designed to provide space for family and individual needs. Besides, it is expected to have a meeting room for the occupants and their neighbors (Firmansyah *et al.*, 2018). Equipped with a hearth, highland houses have a meeting room for the occupants and their neighbors. A hearth comes complete with a table and stools, making the room perfect for casual gatherings between the occupants and their neighbors. Social-environmental conditions will exert an influence on adaptation in a group including on the spatial configurations of a house (Asikin *et al.*, 2019). In highland houses, a mutual aid has been established among the communities. They show their empathy to their neighbors who hold *hajatan* (a communal meal in which the hosts share food with their neighbors). Therefore, their kitchens (hearth rooms) are located close together and the back doors of the kitchens are inserted to connect each other (Fig. 8).



Fig. 8: Hearth Rooms of Which Back Doors are connected, a) A Hearth was converted to a gas stove, b) A Wood-Burning Hearth

Source: author

The use of a hearth as an element of socialization is the identity of highland areas which can be social control in the areas. The health problems caused by the use of a wood-burning hearth can be minimized by the conversion into another type of hearths which produces less smoke. Such aspects as locality and cultural identity are important to create a humane region in the globalization era. The identity of the region should be maintained to filter out outside influences. Strategies to protect a region can be carried out through social control (Suprpti *et al.*, 2017). Tourism is an external aspect that can change the identity of a region. Some villages in Wonosobo and Banjarnegara regencies have been tourist destinations due to their magnificent panoramic nature and the presence of the Dieng Temple. The villages include Dieng Kulon, Dieng Wetan, and Sembungan. Hostelry service is even provided in some of the villages due to the needs of tourists. The transformation from a house to a homestay has changed the meanings of a hearth (from symbolic to functional). Such a transformation due to the development of tourism causes a hearth to have a pragmatic function. A hearth is merely used to provide warmth (Fig. 9).



Fig. 9: A Gas-Fueled Hearth in a homestay

Source: Author

The transformation of the use of hearths has changed the spatial configurations. The change in the spatial configuration due to tourism development can also be seen in Balinese architecture ((Putra, Lozanovska and Fuller, 2019). Such change is in line with the results of another study emphasizing that the transformation in the form of a house is developed to provide convenience and protection. A house should bring in benefits and wealth for its owner (Cahyono, Setioko and Murtini, 2017). The spatial transformation due to tourism development should not eliminate local culture. The preserved values of the local culture will allow many strengths in many fields. A concept of spatial arrangement for the identity of local culture should be created to preserve the values of local wisdom. The transformation of the value of space occurs due to globalization. The transformation of space takes place in the kitchen. A long time ago a kitchen was separated from the main house, but at present, a kitchen has been a part of the main house (Suprapti *et al.*, 2019). Culture in a society should be preserved. Studies in Seochon, Seoul, and Kauman, Indonesia, have indicated that cultural preservation can be a value-added in tourism development (Suprapti *et al.*, 2018). Modernism does not have to eliminate culture existing in a society. Advances in technology including the use of social media should be able to be value-add in tourism development. For example, a study conducted using social media seeks to find out familiar buildings (Mahmoudi Farahani, Motamed and Ghadirinia, 2018).

Conclusions

The earliest hearths were used to cook food. Advances in technology and modernism have transformed the function of the hearths. Communities who believe in symbolic meanings of the hearths maintain the use of wood-burning hearths. The preservation of the hearths is inseparable from their flexibility. The availability of fuels has been a factor affecting preservation. Besides, the wood-burning hearths are considered to be able to adapt to the need for drying crops. Some communities have transformed the function of hearths due to advances in technology and modernism. The presence of electricity and gas technology caused them to transform the meanings of hearths from symbolic to pragmatic. Hearths can only present a functional element, i.e. providing warmth. Other factors influencing the transformation of the meanings include tourism development and health concerns.

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