# Influence of Socioeconomic Activities on House Form and Settlement Patterns Among the Tiv People of Central Nigeria

Thomas Terna Aule\*, Roshida Binti Abdul Majid\*\* & Mahmud Bin Mohd Jusan\*\*\*

#### **Abstract**

The formation of housing and settlement patterns, such as shape, space enclosure and organisation, are influenced by physical, social and economic factors. However, Rapaport found that sociocultural factors are the primary determinants of built form. This view has been challenged, justifying a replication of the study in other built environments. This study explores the influence of the socioeconomic occupation of the Tiv people in Nigeria on their housing and settlement patterns. The means-end chain qualitative enquiry was applied during interviews with twenty-four participants to determine the inherent socioeconomic values connecting their occupation to settlement pattern. Their settlements were found to be dispersed, with aggregated joint compounds, creating sufficient space for farming. However, the pattern of dispersion of settlements poses security risks. Therefore, transformative efforts are required to aggregate the settlements to make more land available for mechanised agriculture and to enhance people's safety. More studies are required to reveal the sociocultural values of Nigerian Indigenous housing for sustainable development of their built environments and way of life.

**Keywords**: housing form; means-end chain; Nigeria; settlement pattern; socioeconomic activities; Tiv people

<sup>\*</sup> Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia and Department of Architectural Technology, Federal Polytechnic Kaura Namoda, Nigeria. Email: tutee1000@gmail.com

<sup>\*\*</sup> Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia. Email: b-roshida@utm.my

<sup>\*\*\*</sup> Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia. Email: b-mahmud@utm.my

#### Résumé

Les créations de logements et de modèles de peuplement, telles que la structure, la clôture de l'espace et l'organisation, sont influencées par des facteurs physiques, sociaux et économiques. Cependant, Rapaport a constaté que les facteurs socioculturels sont les principaux déterminants de la forme des bâtiments. Ce point de vue a été contesté par la conduite d'une étude dans d'autres espaces bâtis. Cet article explore l'influence de l'occupation socio-économique du peuple Tiv au Nigeria sur ses modèles de logement et d'habitation. L'enquête qualitative sur la chaîne des moyens et des fins a été appliquée lors d'entretiens avec vingt-quatre participants afin de déterminer les valeurs socio-économiques inhérentes qui relient leur occupation à leur mode d'habitat. Les habitations ont été construites de manière dispersée, avec des enceintes communes agrégées, créant ainsi suffisamment d'espace pour l'agriculture. Toutefois, la dispersion des habitations pose des problèmes de sécurité. Par conséquent, des efforts de transformation sont nécessaires pour regrouper les logements afin de mettre plus de terres à la disposition de l'agriculture mécanisée et d'améliorer la sécurité des personnes. De plus amples études sont nécessaires pour révéler les valeurs socioculturelles de l'habitat indigène nigérian en vue d'un développement durable de leur environnement bâti et de leur mode de vie.

**Mots-clés :** forme d'habitat ; chaîne des moyens et des fins ; Nigeria ; modèle de peuplement ; activités socio-économiques ; peuple Tiv

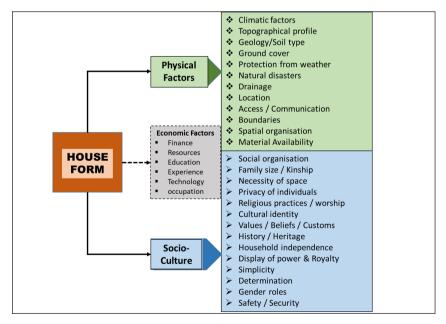
#### Introduction

House form and settlement patterns reflect a people's cultural heritage, which has evolved experimentally through time (Jiboye 2014). The limited perception of house form as the plan shape, distinct from its style or elevation (Maina 2013a), has been expanded to include other aspects of the built environment, such as space size, space use, spatial planning, layout and general compound organisation (Adedeji and Amole 2018; Olotuah, Olotuah and Olotuah 2018). Scholars agree that these house-form components develop according to physical (geographical) and sociocultural influences (Aule, Majid, Jusan and Ayoosu 2022; Aule, Majid, and Jusan 2022a).

Rapoport (1969) examined the determinants of house form in the book *House Form and Culture* and concluded that housing and settlements are shaped mainly by various sociocultural factors, such as family size, kinship, identity, values, and gender divides, as well as socioeconomic influences

like resource availability, occupation, craft and technology. Rapoport's findings, which give a secondary position to physical factors such as climate, topography, location and material availability, as shown in Figure 1, have been questioned by researchers over time. The criticisms are premised on the scope of Rapoport's study, dependence on secondary sources and stance on spatial and temporal homogeneity (Saad 1991; Sheuya 2007; Vestbro 2013). The debate justifies the need to replicate the study in other community settings to test whether house form factors are also dependent on peoples' geographical location, historical heritage and other contextual attachments.

Even though house form may vary according to people's history, culture and living conditions, as postulated by Rapoport's critics (Maina 2013b; Nguluma 2003; Saad 1991), it is also governed by the human freedom of choice in designing homes to meet growing family needs relating to function and space, among other psychosocial factors. The freedom to choose no doubt inclines towards the sociocultural in-house form influences. The previous studies did not expressly include socioeconomic factors such as age, status, income, education, associations, occupation or employment, giving room for further questioning.



**Figure 1:** Factors that influence Indigenous housing form Source: Adapted from Rapoport (1969), Saad (1991) and Maina (2013b)

The Indigenous built environment of the Tiv people of central Nigeria is based on specific sociocultural values, affected by climate and locally available building materials (Bohannan and Bohannan 2017). Furthermore, Isah and Khan (2016) note that Tiv traditional architecture types share characteristics in their curved house shapes, with few discernible variations in their housing pattern, particularly in aggregating them in compound settings or construction methods. Since the Tiv people predominantly engage in farming, this raises the question of the connection between their house form and agricultural occupation. In addition, Norris *et al.* (2011) and Pavón (2014) assert that since socioeconomic activities influence Indigenous settlements and livelihoods, this needs further exploration, especially in developing societies.

Thus, this study examines the factors influencing house form among the Tiv people of Benue state in central Nigeria. It focuses on socioeconomic influences, such as occupation and activities, family and community settings and the impact of their sociopolitical organisation on the formation of their housing and settlement patterns. Previous studies have attempted to uncover the meanings and values that play out in the formation of housing and the built environment of the Tiv people (Gyuse 1979; Makar 1994; Uji 2021). However, this study uses a systematic approach that elicits the meaning and values through concrete and abstract attributes and functional and psychosocial consequences for the different components of housing: wall shape, materials and finishes; roof shape, framing and cover; and compound and settlement settings. It lays particular emphasis on the compound setting and settlement pattern as these mainly relate to the occupation of farming, define the communal nature of the society and reflect its sociopolitical nature.

# Socioeconomic activities of the Tiv people

Though socioeconomic factors generally refer to age, status, income, education, employment, religion, associations and other communal aspects, this study focuses on the people's occupation, family and communal interactions. The Tiv people are among the most populous ethnic groups in Nigeria surpassed only by the Hausa, Yoruba and Igbo. They are the largest ethnic group in Benue State and are regarded as responsible for making the State Nigeria's 'food basket' (Ahua 2019; Gwa 2016; Iorliam 2015). As shown in Figure 2, the people are principally farmers whose staple crops are yams (Dioscorea spp.), bulrush millet (Pennisetum sp.) and guinea corn

(Sorghum sp.), among other crops (Ahokegh 2014). According to Makar (1994), the leading economy of the Tiv people is agro-business, followed by hunting, fishing, and livestock rearing, as well as secondary domestic industries, such as weaving, smithing and carving.



**Figure 2:** Images from Tiv Farming Communities Source: Researchers' Fieldwork

According to Ogundele (2005a, 2005b), the Tiv people regard yam cultivation as their birthright and engage in it with dutiful enthusiasm. In addition to farming, traditional fabric weaving is an important occupation, often seen as a hereditary enterprise, transmitted from one generation to another as a family trade (Gwa 2016; Iorliam 2015). However, their main occupation – farming – is changing rapidly, especially among the younger generation who have attained higher levels of education and choose to work

# in government and private employment instead. Communal activities of the Tiv people

The Tiv people live in patrilocal communities composed of extended family members in scattered clusters, though individualism, or living apart, is becoming prevalent among the younger generations. A family system may include more than a thousand people of the same clan living together (Bohannan and Bohannan 2017; Shishima 2019). Thus, the social organisation of the Tiv people is usually communal, manifesting in their unity, mutual dependence and village interrelation.

Throughout the precolonial and early part of colonial times, labour was customarily structured by age grade or *Kwav*, and this determined how people worked, married, and built their compounds (Tughhemba 2014). Explaining further, Ogundele (2005a) and Iorliam (2015) note that in traditional Tiv societies, families consist of the elderly, young people of different ages and children subsisting together in large compounds. According to Aboh (2005), they are collective formations of persons who organise themselves for communal labour and other social undertakings to improve their relationships. As conceptualised in Figure 3, the communality presents an excellent occasion for immediate and extended family members to unite and work as a group.



**Figure 3:** Communal activities among Tiv people Source: Adapted from fieldwork

In Tiv culture, such practices are conveyed by the principle of Tema Imongo, translated as 'sitting together' (Iorliam 2015:26), which binds a community. Furthermore, the unity shown in eating together is extended to farm cultivation in the practice of exchange labour, known as *Ihyumbe*. It is a rotating labour system adopted especially in rural farming areas, directed by fairness, and is synonymous with the saying, 'If you labour for me today, I labour for you tomorrow' (Iorliam 2015:44). Given the communal nature of Tiv society, Shija (2018) found that, in the past, few individuals sought to live in isolation.

Traditionally, when a Tiv man comes into wealth, he considers the treasure as belonging to the community or entire kinship group. This worldview was highly valued while individualism was abhorred and considered

divisive, capable of causing disaffection among kith and kin (Anjov 2013; Shishima 2019; Tughhemba 2014). Therefore, people were always helping one another by marrying a member of an age grade, assisting with farm work, or disciplining children, for example. Nevertheless, Ukuma (2015) notes instances where individualism rears its head; when a man becomes wealthy and throws a lavish celebration, he enjoys the individual pride of accomplishment. Even so, it is shared among peers and could be seen as a challenge to peers to put in more effort to attain similar rewards.

Festivals are feasts or merry-making events that are celebrated by an individual, a group, or an entire community (Onaji 2013; Shija 2018). According to Ukuma (2015), festivals could be secular, like sports, or purely religious, like the Easter festival. Religious and secular elements come together in festive celebrations and are regularly observed. Onaji (2013) notes that traditional festivals on the continent generally offer avenues for socialisation, which engenders a strong communal spirit. They are also opportunities for a community's critical appraisal and reappraisal (Ukuma 2015), ensuring conformity to approved standards of behaviour and social norms and communicating plans for the year ahead. Festivals are effective communal activities that people collectively celebrate within the context of any particular society.

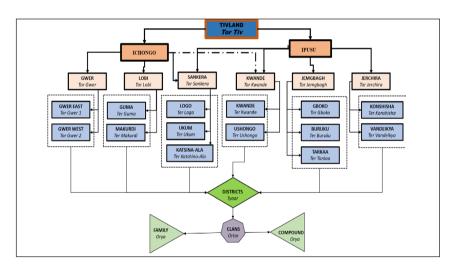
This 'primordial' communality contrasts directly with the present generation of Tiv, who seem to care more about satisfying themselves and immediate family members. The many younger adults who have attained higher educational levels and work in cities, at home and abroad have become more individualistic and see little or no need to feed the whole community. Expanding families due to population growth also results in many communal clashes, all working against communal living as practised by the Tiv ancestors.

# The sociopolitical setting of the Tiv people

The construct of 'segmental opposition' was identified as the root social organisation of the Tiv people (Bohannan and Bohannan 2017; Tughhemba 2014). This concept entails greater recognition of close patrilineal relations than distant relatives, forming the foundation for segmentary family and household organisation, the basis for a political system and, ultimately, a settlement pattern. Generally, the social setting of the Tiv people is based on kinship affinity; the people are keenly aware of genealogical relationships, tracing lineage almost exclusively through the male parent (Bohannan

and Bohannan 2017; Torkula 2001; Wegh 1998). Another dimension of traditional Tiv social organisation is that it is egalitarian among males, emphasising fairness, equality and equity, with no royal or ruling houses (Ahua 2019; Shija 2018; Shishima 2019).

According to genealogical studies, Tiv is recognised as the people's ancestor (although in other accounts, it is traced to Takuruku, Anyamazenga, Karagbe, Shon, Gbe, Akem or Awange), who is said to be the father of all Tiv descendants (Shishima 2018). Irrespective of whoever the original ancestor was, the lineage of the ethnic group centres on two of his offspring – Ichongo and Ipusu (Iorliam 2015; Makar 1994; Shishima 2018). These two sons of Tiv gave rise to six intermediate clans, based on agnatic lineage, namely Jerchira, Jemgbagh, Kwande, Lobi, Gwer and Sankera, which occupy fourteen local government councils in Benue state (Gwa 2016; Tughhemba 2014) as presented in Figure 4.



**Figure 4:** The sociopolitical structure of the Tiv people

Source: Authors' conception

# The family

The compound as a unit of communal life consists of a father and mother and their direct children (Anjov 2013; Bohannan and Bohannan 2017; Torkula 2001). It could also include the extended family, other relatives of a compound head and wives (if the family is polygamous). When a

compound splits into different constituents, probably due to the death of the head, each wife is given a piece of land to settle on with her children, forming another family unit. The first wife and her children are often left in the old compound locally called *Tse* (Ogundele 2005a; Torkula 2001). The head of each newly formed family unit, usually the oldest male son, automatically becomes the head of their new household.

# The compound

Among the Tiv, a compound houses a group of individuals who share specific rights and responsibilities. The compound's residents often form an extended patrilineal family whose head is known as *Orya* (Ahokegh 2014; Tughhemba 2014). The compound head is usually the oldest male, forming a unit with his wife (or wives), young children, unmarried daughters, and adult sons with their wives and children. According to Ogundele (2005a), the compound head has some authority within the compound. People living in a compound may not necessarily be close kin as there may also be guests and strangers (*Or-van-inya*). As Bohannan and Bohannan (1954) assert, an average compound could have ten occupants, but it is usual to come across more significant compounds of up to eighty persons.

Every compound is named after its head (*Orya*) and is controlled by an assembly of male elders (Asor 2013; Tughhemba 2014). Traditionally, the *Orya* chairs this assembly, whose tasks comprise the compound's political, societal, spiritual and economic well-being (Agber and Mase 2014; Ogundele 2005a). *Orya*, as the head of the compound, also has the duty of protecting the daily peace of the compound and resolving differences that may come up between people living in the compound. He is bestowed with the power to chastise and maintain obedience subject to the nature of the wrongdoing. In addition, as noted by Kyoon-Achan (2013), *Orya* has the authority to regulate the location of new houses.

Wegh (1998) stated that *Orya's* capacity to carry out his tasks fairly could unite or scatter the compound. Therefore, every compound head tries to be just and steady in controlling his compound. Compound splits usually occur due to specific events: a re-adjustment following the death of a compound head; a married adult seeking some form of independence and privacy; a particular kind of migration called *Tyev*, meaning 'going to the farm'.

#### Clan and district

These expansive lineage segmentations connect many compounds into larger geographical units, forming an immediate community called *Ipyaven* (Ahokegh 2014; Ahua 2019). Torkula (2001) states that Tiv people believe in geographical continuity for about twenty generations. The clan is concerned with groups activated for specific rituals and marital purposes. A collection of clans with a common lineage forms a district, *Tar*, with a head, or *Tyoor* (Adega 2011, 2013). In today's sociopolitical setting, most districts have become 'political wards' (Asor 2013:94) to allocate polling units and elective positions.

Above the ward hierarchy is the local government council, a collection of districts traditionally headed by a second-class chief, or *Ter* (Tughhemba 2014). A leader, or *Tor*, administers two or more historically related local government councils. Today, Tivland has rulers at the level of *Tor* in Jerchira, Jemgbagh, Kwande, Sankera, Gwer and Lobi (Gwa 2016; Tughhemba 2014). Both *Ter* and *Tor* preside over traditional matters at their corresponding levels and are members of an overall structure called the Tiv traditional council.

#### The Tiv nation

The Tiv nation is the total collection of families, compounds, clans, districts and divisions in Tivland (Anjov 2013). It is the largest unit, comprising the territory of Tivland and its sovereignty, stratified by a segmented system of patrilineal descent groups (Ahua 2019; Tughhemba 2014), with balanced opposition between sections within the system as the basis for the political organisation. The supreme leader of the Tiv people is called *Tor* Tiv and is traditionally a male (Ahua 2019). The selection of *Tor* Tiv is based on the principle of *Ya-Na-Angbian* (Tughhemba 2014), a rotational tradition between Ichongo and Ipusu (Shishima 2018), the two sons of Tiv progeny, who represent the two genealogical divides among the people.

#### Materials and Methods

The research design for this study was a qualitative data collection and analysis strategy based on the Means-End Chain (MEC) model. As part of the MEC research methodology, laddering interviews were conducted to gather the data. Initially developed for marketing research, laddering involves about thirty minutes of one-on-one in-depth conversation, focusing

on why product features (house) are essential to a client (Zinas and Jusan 2017:9) which are influenced by personal values utilizing the Means-End Chain (MEC.

This study conducted twenty-four interviews, above the required minimum sample size of twenty people for an effective MEC inquiry (Mirosa and Tang 2016; Skalkos *et al.* 2020). Purposive sampling was employed to choose respondents from three local government areas in Benue State – Makurdi, Ukum and Vandeikya – based on their experiences with Tiv housing. The respondents were community leaders, local builders and indigenous house-owners, specifically selected for their knowledge, experience and competence in Tiv indigenous housing, as shown in Figure 5.

→ Crosstab Criteria									
Demography	1.1 WALL SHAPE	1.2 WALL MATERIAL	2.1 ROOF SHAPE	2.2 ROOF FRAME	2.3 ROOF COVER	3.1 COMPOUND SHAPE	3.2 COMPOUND SETTING	3.3 SETTLEMENT PATTERN	Total (unique)
Location = Makurdi L.G (9)									
Position = Community Lea	2	2	2	2	2	2	2	2	2
Position = Local Builder (1)	1	1	1	1	1	0	1	1	1
Position = House Owner (5)	5	5	5	5	5	5	5	5	
Position = Women Leader	1	1	1	1	1	1	1	1	1
Location = Ukum L.G (7)									
Position = Community Lea	0	0	0	0	0	0	0	0	(
Position = Local Builder (2)	2	2	2	2	2	2	2	2	2
Position = House Owner (4)	4	4	4	4	4	4	4	4	4
Position = Women Leader	1	1	1	1	1	1	1	1	1
Location = Vandeikya L.G (8)									
Position = Community Lea	1	1	1	1	1	1	1	1	1
Position = Local Builder (3)	3	3	3	3	3	3	3	3	3
Position = House Owner (3)	3	3	3	3	3	3	2	3	3
Position = Women Leader	1	1	1	1	1	1	1	1	1
_l Total								( )	
Total (24)	24	24	24	24	24	23	23	24	24

**Figure 5:** Case classifications of the 24 interview participants on location and position Source: Researchers' fieldwork

Social, cultural and economic meanings and values regarding the housing and settlement patterns of the people were elicited using the MEC. The results were coded, cross-tabulated, presented in word clouds and hierarchically mapped for Content Analysis using Nvivo 12 software. The tabulation, word cloud and hierarchical value map (HVM) were coded according to the ladders of Attributes (A), Consequences (C) and Values (V). The respondents' information was tabulated with case classifications such as gender, location and position, and then semi-structured answers were grouped into their respective nodes.

#### Results

A ladder in MEC may be defined as a series of answers that establish linear or branching links during an interview. Figure 6 summarises the content of the twenty-four responses, extracting general and sociocultural meanings and values surrounding Tiv dwellings. From known to unknown (Shafique and Majid 2020; Zinas and Jusan 2012) and tangible to abstract characteristics (Johnson *et al.* 1992), housing as a complex entity was divided into eight components: wall shape, wall material, roof shape, roof frame, roof cover, compound shape, compound setting, and overall settlement pattern.

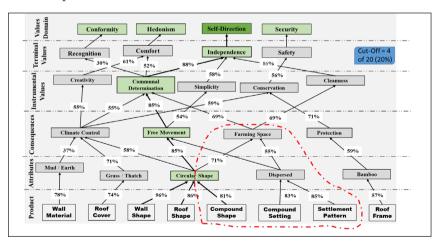
This study was concerned specifically with the three components of compound shape, compound setting and the overall settlement pattern of the Tiv people because these are perceived to be directly influenced by socioeconomic activities. Individual houses may have little or no connection to farming occupation, expression of communal living and the people's general setting. On the other hand, dispersed settlement patterns and open compound settings develop over time to reflect their inhabitants' socioeconomic occupation (farming), among other sociocultural community activities. Though the research was done based on the physical attributes of the built environments, this article highlights the compound setting and settlement patterns because they show a more concrete manifestation of the influence of the people's occupation and economic activities.

Respondents first recognised the most concrete features at the attribute level, including shapes, settings and spatial relationships. Then, abstract meanings and consequent functions were identified, leading to the final values to explain the 'why' of each selected component (Zinas and Jusan 2017:8) made based on the behavioural dynamism of people. In this cosmic dynamism, they keep shifting from one stage to another, within the same cosmic space. Housing preferences and choices, like any other life interests, therefore, operate within this framework. Unlike merchandised product brands, housing brands are hardly known, probably because of the heterogeneous nature of the housing product - the house. However, very little is known about the relevant housing attributes. As illustrated in Figure 6, the responses were coded into nodes, and then analysed and explored in a word cloud.

**Figure 6:** Word cloud indicating the determining factors in Tiv Indigenous housing and settlement

Source: Authors' conception

With data collected from twenty-four respondents, the components are deemed valid with up to four direct links, called cut-off points (Fabbrizzi *et al.* 2017; Mirosa and Tang 2016). The responses were classified according to the MEC hierarchy of Attributes, Consequences and Values. Additionally, Figure 7 shows a visual representation of the relationships using a Hierarchical Value Map (HVM).



**Figure 7:** Hierarchical Value Map (HVM) shows the relationship between dispersed compounds, settlements and expansive farming space

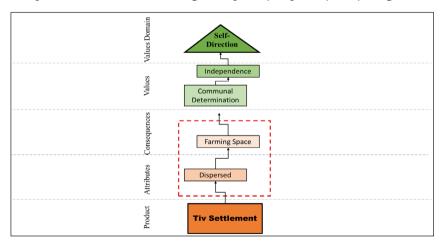
Source: Authors' conception

The relationships are shown in the HVM by arrows of varying sizes, with thicker lines indicating stronger relationships (Lin, Jeng and Yeh 2018). Generally, links with less than four interconnections are considered insufficiently strong to be mapped. Whereas connections of four to nine links are considered moderate, ten or more are considered very strong. Alongside the directed arrows is the mean frequency of mentions, represented as a percentage of connections in a particular node.

#### Discussion

As shown in Figures 6 and 7, the findings indicate response variations as to why each quality was essential to the respondents. The map was created by taking the average responses to the importance of compound shape and setting and settlement pattern.

The round form of the Tiv houses, according to the responses, represents their cultural heritage, which, together with their circular compounds, enables their inhabitants to move freely in their natural environment. As summarised in Figure 8, their dispersed constructed environment provides spacious land between homes for farming activities, which is the main socioeconomic occupation of the Tiv people. Their collective engagement in the physical activities of farm cultivation and housing construction also demonstrates the people's communal determination to live sustainable and independent lives, with some degree of privacy, especially the young adults.



**Figure 8:** Dispersed settlements offer plenty of space to support farming activities. Source: Conceptualisation by the authors

The description of Tiv settlements as 'planned, nucleated and agglomerated into distinct castes' (Agber 2017:424) may have limited application in more extensive compounds, village squares and other periurban communities. It is also conceivable that the 'nucleation' scenario could have been a characteristic of the precolonial era when the Tiv inhabited hilltops and slopes (Ogundele 2005b:2). Though the general settlement pattern may be seen to comprise nucleated compounds with isolated, individualised houses spread over a challenging terrain (Uji 2021:6), many view Tiv built environments as being dispersed, scattered and spontaneous (Ohiaeri 2020), reflecting their socioeconomic focus on agriculture, which requires adequate land for shifting cultivation practices (Tughhemba 2014).

The dispersed settlement pattern of Tiv people is seen to be connected historically to their 'dispersal' from *Swem* into the Benue Valley (Aluaigba 2011:88) and their eventual settlement based on patrilineal communal groups described as 'segmental opposition' (Torkula 2001; Tughhemba 2014). The people live in defined kinship groups and form traditional associations for cooperation in farming and construction, among other communal practices. Their dispersed settlements permit farming as the main socioeconomic occupation and the cultivation of plantations, orchards and garden crops, which contribute to the formation of a climate-friendly, gently landscaped environment. Although the freestanding huts aggregated around a central compound may be seen to express a desire for communal living, the settlements are dispersed enough to provide ample space for farming to achieve family subsistence and economic sustenance.

On the other hand, Tiv houses suffer the negative consequences of perishable materials, vulnerable to erosion and fire, and require regular maintenance. The dispersed settlement pattern also exposes them to insecurity and attacks, mainly external to their environments.

Though all living things require the basic needs of food and shelter, the human desire to attain the social, cultural, economic, religious and psychological levels of esteem and self-actualisation condition people's long-term activities to achieve more abstract fulfilling needs (Maslow 2000). Based on the hierarchy of needs, Dzurgba (2016) notes that a society that

primarily emphasises physiological needs such as food and shelter will find it difficult to develop like others who work towards fulfilment and actualisation. Farming as an occupation among the Tiv people could, therefore, be seen as an expression of determination to achieve food security and live a comfortable and fulfilling life. Therefore, this study agrees with Rapoport that social, cultural, economic, religious and psychological factors are the primary influences on the form of people's houses.

#### Conclusion

This study sought to establish the relationship between the socioeconomic occupation and the formation of housing and built environment among the Tiv people of Benue State in central Nigeria. The study reviewed the social, economic, and political environment of the people and highlighted the compound setting and settlement pattern as the main aspects that relate directly to their farming occupation, as well as their communal nature and sociopolitical setting. The study conducted laddering interviews to discover the meanings and values that connect the Tiv indigenous settlement pattern and their socioeconomic activities. The results show that most compounds and settlements are circular and built around aggregated houses in an overall dispersed setting. The dispersed settlements provide ample space for farming activities, ventilation and a clean environment. Generally, the local houses and settlements reflect the people's cultural heritage while providing essential comfort in a natural setting. The settings further reflect the people's collective determination to live a simple lifestyle and achieve some degree of privacy for ultimate independence, especially among younger adults.

Farming, as the most significant socioeconomic activity of the traditional Tiv people, influences their dispersed settlement pattern. However, while the people may still prefer to live in expansive environments to be able to continue farming, authorities should make conscious efforts to aggregate the settlements based on their respective sociocultural delineations. Nucleating dispersed hamlets into larger settlements can create more farmland for mechanical cultivation to fulfil their socioeconomic occupation, enhance security and mitigate the protracted contests for land. To also ensure the comfort and cultural sustainability of the people, new housing developments in the future should consider their mainstream values of communal living and settlement preferences for farming activities. This recommendation should be relevant to the government, developers, designers, planners and other housing stakeholders.

### Acknowledgements

The authors wish to acknowledge their respective institutions for providing a conducive environment for this research. Appreciation also goes to the supervisors for their contribution, participation and feedback. In addition, the authors are grateful to the numerous contributors, especially the interview participants, who provided useful insight to enrich the study.

#### Conflict of Interest

The authors wish to affirm that this study has no potential conflict of interest.

#### References

- Aboh, M.M., 2005, Technological change and its effect on traditional religious beliefs: The Tiv experience. PhD Thesis: University of Jos.
- Adedeji, J.A., and Amole, S.A., 2018, Book review: House form and culture Amos Rapoport (1969), *Space and Culture*, pp. 1–3. DOI: 10.13140/RG.2.2.11116.87687.
- Adega, P.A., 2011, Tiv modern burial rituals and concern for the physical environmental, *African International Journal of Environmental and Ecological Studies*, Makurdi, pp. 1–20.
- Adega, P.A., 2013, Language endangerment and the dilemma of Tiv language: Tiv ethnic language literature to the rescue, Makurdi: Lecture Series, Department of Religion and Philosophy, Benue State University, pp. 1–24.
- Agber, T.C., 2017, Factors militating against the development of Tiv indigenous knowledge, in Ngulube, P. ed. *Handbook of research on Theoretical Perspectives on indigenous knowledge systems in developing countries.* Hershy PA: IGI Global, pp. 422–443. DOI: https://doi.org/10.4018/978-1-5225-0833-5.ch020.
- Agber, T.C., and Mase, I.E., 2014, *Tiv types and methods of fishing in Vandeikya local government area*, Makurdi: Vandeikya L.G.A.
- Agena, T.T., 2018, Ikyuryan (covenant making) among the Tiv as a religio-cultural approach to conflict resolution in Benue state. PhD Thesis, Benue State University.
- Ahokegh, A.F., 2014, Nyambuan revolt of 1939: Tradition versus modernity in Tiv land of central Nigeria, *International Journal of Multidisciplinary Academic Research*, Vol. 2, No. 2, pp. 1–8. https://www.academia.edu/download/54080843/NYAMBUAN-REVOLT-OF-1939-TRADITION-VERSUS-MODERNITY-IN-TIV-LAND-OF-CENTRAL-NIGERIA.pdf.
- Ahua, E., 2019, A theological appraisal of marriage in Tiv culture, PhD Thesis, Duquesne University. https://search.proquest.com/openview/644912605228 5029009a70f2e29c1533/1?pq-origsite=gscholar&cbl=51922&diss=y.
- Ajekwe, C.C. and Ibiamke, A., 2017, The Tiv sociocultural environment and entrepreneurship emergence, *IOSR Journal of Business and Management*, Vol. 19, No. 1, pp. 42–49. DOI: 10.9790/487x-1901064249.

- Aluaigba, T.M., 2011, Exploiting the Tiv traditional methods of conflict resolution in north-central Nigeria, *African Conflict and Peacebuilding Review*, Vol. 1, No. 2, pp. 74–103. http://www.jstor.org/stable/10.2979/africonfpeacrevi.1.2.74.
- Anjov, K.T., 2013, Metaphysics and development: The experience of the Tiv people of north-central Nigeria, Master's thesis, University of Nigeria, Nsukka.
- Asor, G., 2013, A history of post-election violence in Tivland since 1979, Master's Thesis, Benue State University, Makurdi.
- Bohannan, P., 1954, *Tiv Farm and Settlement*. London: American Anthropologist. Bohannan, L. and Bohannan, P., 2017, *The Tiv of central Nigeria: West Africa part VIII*. 3rd edn, New York: Routledge.
- Dzurgba, A., 2016, *Elements of Tiv culture: Material and Ideological studies*. Ibadan,: John Archers.
- Fabbrizzi, S., Marinelli, N., Menghini, S., and Casini, L., 2017, Why do you drink? A means-end approach to the motivations of young alcohol consumers, *British Food Journal*, Vol. 119, No. 8, pp. 1854–1869. DOI: 10.1108/BFJ-12-2016-0599.
- Gwa, R.N., 2016, An evaluation of decorated traditional cloth used in Tiv cultural activities in Benue state, Nigeria. Master's Thesis: Ahmadu Bello University, Zaria, Nigeria.
- Gyuse, T.T., 1979, Culture and housing form among the Tiv, *Savanna: A Journal of the Environmental and Social Sciences*, Vol. 8, No. 2, pp. 45–55.
- Iorliam, C.T., 2015, Educated young people as inculturation agents of worship in Tiv culture: A practical theological investigation of cultural symbols. PhD Thesis: St Thomas University, Miami Gardens, Florida.
- Isah, A.D., and Khan, T.H., 2016, Re-emergence of indigeneity in transformed layouts in urban public housing in Nigeria, *International Journal of Built Environment and Sustainability*, Vol. 3, No. 1, pp. 1–9. DOI: 10.11113/ijbes.v3.n1.104.
- Jiboye, A.D., 2014, Socioeconomic characteristics and satisfaction of tenants in public housing in Lagos, Nigeria, *Africa Development*, Vol. XXXIX, No. 3, pp. 31–50.
- Johnson, M.D., Lehmann, D.R., Fornell, C., and Horne, D.R., 1992, Attribute abstraction, feature-dimensionality and the scaling of product similarities, *International Journal of Research in Marketing*, Vol. 9, No. 2, pp. 131–147. DOI: 10.1016/0167-8116(92)90034-I.
- Kyoon-Achan, G., 2013, Original ways: An exploration of Tiv and Inuit indigenous processes of conflict resolution and peace-making, PhD thesis: University of Manitoba.
- Lin, C.S., Jeng, M. Y., and Yeh, T. M., 2018, The elderly perceived meanings and values of virtual reality leisure activities: A means-end chain approach, *International Journal of Environmental Research and Public Health*, Vol. 15, No. 4, pp. 1–13. DOI: 10.3390/ijerph15040663.
- Maina, J.J., 2013a, Constants amidst change: Socio-cultural factors influencing house form in Tangale land, northeast Nigeria, *Journal of the International Society for the Study of Vernacular Settlements*, Vol. 2, No. 4, pp. 1–19.

- Maina, J.J., 2013b, Mana, the sociocultural facets and spatial morphology of Tangale domestic spaces. PhD Thesis: University of Nottingham.
- Makar, T., 1994, *The history of political change among the Tiv in the 19th and 20th centuries*, Enugu: Fourth Dimension Publishing Company.
- Maslow, A.H., 2000, A theory of human motivation, *Psychological Review*, Vol. 50, pp. 370–396. DOI: 10.4324/9781912282517.
- Mirosa, M., and Tang, S., 2016, An exploratory qualitative exploration of the personal values underpinning Taiwanese and Malaysians' wine consumption behaviours, *Beverages*, Vol. 2, No. 1, p. 2. DOI: 10.3390/beverages2010002.
- Nguluma, H.M., 2003, Housing themselves: Transformations, modernisation and spatial qualities in informal settlements in Dar es-Salaam, Tanzania. PhD Thesis: Royal Institute of Technology, Stockholm.
- Norris, D., Van Zyl, E.C., Hashe, W.T., Mafuma, M.S., Senyolo M.P., Mngomezulu, S.P., Enserink, D., Ngambi, J.W. and Mbajiorgu, C.A., 2011, Can it be achieved? Partnering towards improving livelihoods in the Ganspan settlement, Northern Cape province, South Africa, *Africa Development*, Vol. 36, No. 1, pp. 49–62. DOI: 10.4314/ad.v36i1.
- Ogundele, S.O., 2005a, Ethnoarchaeology of domestic space and spatial behaviour among the Tiv and Ungwai of central Nigeria, *The African Archaeological Review*, Vol. 22, No. 1, pp. 25–54. DOI: 10.1007/sl0437-005-3158-2.
- Ogundele, S.O., 2005b, Indigenous technologies for crop preservation among the Tiv and Gwari of Nigeria, *Legon Journal of Sociology*, Vol. 2, No. 2, pp. 1–14.
- Ohiaeri, M.B., 2020, A multi-criteria analysis of adapting the Tiv traditional hut to climate change: A case study of the Kanshio community, Makurdi, Benue state Nigeria. PhD Thesis: University of Wolverhampton.
- Olotuah, A.O., Olotuah, A.A. and Olotuah, A.M., 2018, Acculturation and traditional house forms in Nigeria, *International Journal of Engineering Sciences & Research Technology*, Vol. 7, No. 12, pp. 275–280.
- Onaji, E., 2013, Harnessing local festivals for tourism promotion in parts of Benue state. PhD Thesis: University of Nigeria, Nsukka.
- Pavón, J.C. Perez Velasco, 2014, Economic behavior of indigenous peoples: The Mexican case, *Latin American Economic Review*, Vol. 23, No. 1, pp. 1–58. DOI: 10.1007/s40503-014-0012-4.
- Rapoport, A., 1969, *House form and culture*, edited by Wagner P. A., Eagleswood Cliffs, NJ: Prentice Hall.
- Saad, H.T., 1991, Folk culture and architecture in north eastern Nigeria, *Paideuma*, Vol. 37, pp. 253–289. DOI: http://www.jstor.org/stable/40341634.
- Shafique, A. and Majid, R.A. (2020) 'Evaluation of user satisfaction concerning Spatial organisation in public open space', *International Journal of Psychosocial Rehabilitation*, 24(8). doi: 10.37200/IJPR/V24I8/PR281195.
- Sheuya, S.A., 2007, Reconceptualising housing finance in informal settlements: The case of Dar es Salaam, Tanzania, *Environment and Urbanization*, Vol. 19, No. 2, pp. 441–456. DOI: 10.1177/0956247807082823.

- Shija, T., 2018, Tiv cultural heritage and the idea of development in contemporary Nigerian society, *IOSR Journal of Humanities and Social Science*, Vol. 23, No. 7, pp. 1–8. DOI: 10.9790/0837-2307010108.
- Shishima, S.D., 2018, Immortality of the soul in Tiv thought system, in Northern Zone conclave of the Rosicrucian Order AMORC. Makurdi: Department of Religion and Cultural Studies, Benue State University, Makurdi, pp. 1–13.
- Shishima, S.D., 2019, Tiv in Politics: Issues and challenges towards 2019 general elections, Paper presented at the Cubanet publishers annual public lectures 19 May 2018, Gboko: Cubanet Publishers, pp. 1–19.
- Skalkos, A., Tsohou, A., Karyda, M., and Kokolakis, S., 2020, Identifying the values associated with users' behavior towards anonymity tools through means-end analysis, *Computers in Human Behavior Reports*, p. 100034. DOI: 10.1016/j. chbr.2020.100034.
- Torkula, A.A., 2001, A survey of the marriage and burial institutions amongst the Tiv of central Nigeria. PhD thesis: St. Clements University.
- Tughhemba, N.T., 2014, Tiv principle of power-sharing, Ya-Na-Angbian, in Tiv social and political philosophy. PhD Thesis: University of Nigeria, Nsukka.
- Uji, Z.A., 2021, Reconfiguring the traditional settlement patterns of the Tiv in central Nigeria for sustainable growth and development, in Ahmad, A. bin H., ed., Integrating Technologies, Communities and Professions in Developing Sustainable Built Environment. Skudai, Johor Bahru, Malaysia: PGSS FABU UTM, pp. 1–59.
- Ukuma, T.S., 2015, Cultural aesthetics in Tiv traditional performances: A critical perspective, *African Journal of Local Societies Initiatives*, Vol. 3, pp. 1–16.
- Vestbro, D.U., 2013, Development Aspects of Formal and Informal Urban Types, *Planum. The Journal of Urbanism*, Vol. 26, No. 1, pp. 1–12.
- Wegh, F.S., 1998, Between continuity and change—Tiv concept of tradition and modernity. Lagos: OVC Ltd.
- Zinas, Z.B., and Jusan, M.B.M., 2012, Means-end chain model framework for measuring housing environment choice behavior, *Journal of Civil Engineering* and Architecture, Vol. 5, No. 6, pp. 535–547. DOI: 10.17265/1934-7359/2011.06.007.
- Zinas, Z.B., and Jusan, M.B.M., 2017, Choice behaviour of housing attributes: Theory and measurement, *Asian Journal of Environment-Behaviour Studies*, Vol. 2, No. 2, pp. 1–18. DOI: https://doi.org/10.21834/aje-bs.v2i2.175.