Exploring Motivational Factors of Indigenous House Form for Value-Based Development: The Tiv People of Central Nigeria in Context

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ABSTRACT

The quest for contextual identity and value-based developments by concerned authorities justifies the necessity to explore the inherent motivating factors that influence housing formation and the built environments of the varied Nigerian ethnic groups. Rapoport's identification of socio-cultural values as the primary influencers of house form has come under scrutiny, stipulating a replication in different contexts. One tends to ask about the motivating factors for the indigenous house form of the different ethnic groups in Nigeria that need to be explored and harnessed for value-based planning, design, and development for future infrastructure. This study explores the motivating factors of the indigenous house form of the Tiv people of central Nigeria, filtered through Maslow's Hierarchy of needs. This qualitative study utilised the Means-End Chain soft laddering technique, where 24 participants were interviewed, analysed, and ranked. According to the findings, Tiv indigenous dwellings are circular-shaped, connecting them to their cultural heritage. The open compounds also permit communal interactions in their natural setting and express their determination to live independent family lives. For housing stakeholders in Nigeria, the primitive values evoked in this study are essential for developing a contemporary, culturally sustainable society.

1. INTRODUCTION

The idea of sustainability encompasses value-based developments in the local, national, and international spheres [1]. Like other developing countries, stakeholders in Nigeria are trying to articulate value-based housing and urban developments for the over 250 ethnic groups [2, 3]. Findings by Maina [4] indicate that previous conventional mass housing developments, without recourse to the people's ideals, result in "uncomfortable prototypes" where occupants make adjustments to accommodate their mainstream values. Similar studies in other climes show how passive adjustments to rural values affect the space and housing form of a group of people [5]. The participation of end-users in the planning, designing and implementation of projects in their domain has been identified as a critical factor in ensuring value-based developments and cultural identity of the people in line with the Sustainable Development goals [6].

Therefore, it becomes imperative to explore the inherent values that motivate the indigenous house form of the different Nigerian ethnic groups to effectively articulate an encompassing vernacular architecture accepted by the majority groups. Additionally, the primitive indigenous values will form a standardised database for sustainable value-based planning, design, and development with distinct identities, in line with modern physical developments.

In reality, numerous interconnected and mutually reinforcing factors influence the people's house form. These include physical and environmental conditions, social structure, cultural values, ontological beliefs, and gender constructions [7]. In precise terms, house form refers to the plan shape, whether circular or rectilinear, among other characteristics of the built environment such as spatial planning, organisation, space sizes, and usage inside a compound or community setting [8]. Generally, the house form may be considered a symbolic outcome of a group of people's cultural heritage in their built environment. The house form is usually experimentally worked out through generations to fulfil their physical, psychological, and socio-cultural demands.

In investigating the determinants of house form, Rapoport [9] finds that built environments usually evolve through time and are affected by numerous physical and socio-cultural factors. While the study acknowledged the role of the physical factors in shaping house form, socio-cultural elements were identified as the primary influencers of built environments. Meanwhile, Maina [10] notes that Rapoport's conclusion that "…house form is the consequence of a whole range of socio-cultural factors seen in their broadest terms" has been questioned by some scholars based on contextual specificities.

Meanwhile, Rapoport's findings seem to agree with an earlier study on elements of human motivation by Maslow [11], illustrating the ambitious goal of people to attain the relatively higher psycho-social hierarchy of self-actualisation. According to the study, human needs are naturally classified into numerous hierarchical degrees, from the most basic needs, through desirable psychological esteem levels, to the highest personal fulfilment attainments. The human drive to reach the most fulfilling hierarchy would have influenced the findings by Rapoport [9] that the socio-cultural elements are the most

significant determinants of house form. In housing development, Williams and Williams [12] note that while physiological decisions such as a place to sleep, wash or cook must be addressed first, users often crave higher personal preferences concerning goals, needs, and values, which in modern times are woven into the design brief.

Consequently, the hierarchical structuring of the human motivating factors from the basic through psychological and to fulfilling needs are understood to be synonymous with Gutman's [13] Means-End Chain (MEC) model for eliciting product values (V) filtered through its physical attributes (A) and consequential utilities (C).

Though Rapoport's conclusion seems to be somewhat connected to Maslow's hierarchy of needs, some scholars still question the primacy of socio-cultural factors in house-from, prompting a need to replicate the investigation in other contexts. Therefore, one could be tempted to ask, "what are the motivating factors of house form among the Tiv people of central Nigeria that need to be harnessed and articulated into Nigerian value-based housing and spatial development?"

This study was conducted in Benue state, Nigeria, to elicit the motivating factors in the indigenous built environments of the Tiv people. The Tiv people of central Nigeria, like in other climes, have developed a distinct indigenous house form based on their specific socio-cultural values, as also impacted by some climatic conditions and locally available building materials [14, 15].

This study first briefly reviews the housing and built environments of the Tiv people before exploring the motivating factors. Using the MEC model, the study employed a qualitative research approach to extract the socio-cultural values of the people's houses and built environments, filtered through their fundamental housing needs, functional utility, and psychological sensations. The factors that influenced the primitive house form of the people may be seen to provide an empirical basis for value-based modern planning, design, and development, as well as a lasting spatial identity for their cultural sustainability.

2. MATERIALS AND METHODS

The methods for this study involve three aspects: reviews, framework, and qualitative interviews. While the first phase concerns a concise literature review of the indigenous housing and built environments of the Tiv people, the second one gives a brief appraisal of the concepts and theories forming the framework for this study. Subsequently, the third aspect involves the qualitative inquiry, designed and conducted using the MEC soft laddering interviews, where the people's motivating values were explored, mapped, and ranked. The MEC soft laddering interview involves semi-structured questions on attributes, consequences, and values, where participants responded in one phrase or a few sentences. All responses were geared towards eliciting inherent values for sustainable value-based planning, designing and development.

2.1 Review of Tiv indigenous housing

Like other ethnic groups in Africa, the Tiv people of central Nigeria are unique in their historical heritage, origin, socio-cultural engagements, and especially, their built environments. Besides the three majority ethnic groups in Nigeria, namely Hausa/Fulani, Yoruba, and Igbo, the Tiv people numbering

over five million, are one of the most populous tribes among the over 250 ethnic groups in Nigeria [16]. The rural population of the Tiv people lives in scattered villages [17], only connected by patrilineal relationships.

According to Isah and Khan [2], traditional Tiv architectural styles have common aspects in their curved dwelling shapes, with few discernible changes in their housing patterns, particularly in compound settings and building processes. As posed in Figure 1, what are the motivating factors for the house form of the Tiv people of central Nigeria that needs to be explored and harnessed for sustainable development?
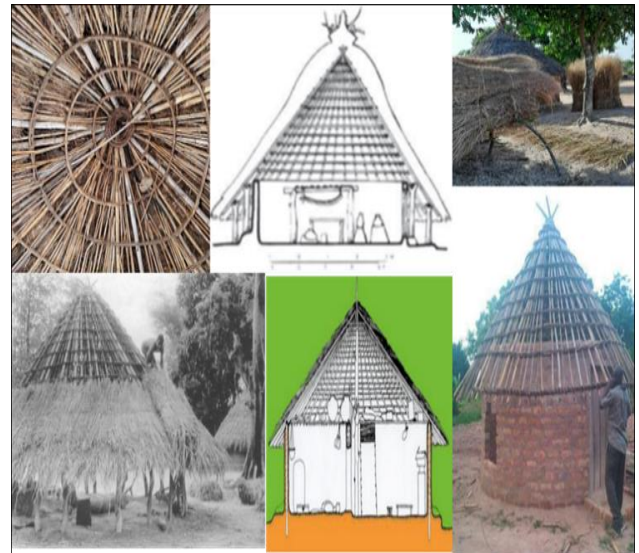

Figure 1. What factors motivated the forms and materials in Tiv indigenous housing to be harnessed for development?

The Tiv people live in large compounds as a family, own mammoth farms, and work together. A compound as an expression of genealogical relationship could comprise as little as two or three huts or as numerous as forty houses. The huts are laid in a circular form flanking themselves, enclosing an open space containing a semi-open traditional gazebo (*Ate*) for receiving visitors. As asserted by Shishima, Dzurgba, and Akper [18], the positioning of the *Ate* at the centre of the compound symbolises unity and communality. Additionally, guests are welcomed in the *Ate*, and household members share typical food, converse on domestic matters, and resolve family difficulties.

One of the main factors that influence the selection of a piece of land for building is the availability of natural building materials. People tend to build their houses where materials used in the building, such as mud, water, stones, reed, canes, plant climbers, and others, are sufficiently available to satisfy them [14, 19]. Other factors for site selection include the presence of a river or stream for adequate water supply, highland for security, safety, and clean air; good soil for farming, among others.

The Tiv people developed indigenous architecture with circular-shaped houses and rounded compound layouts. In finding meanings, it is noted that the compound is functionally circular while the individual houses are geometrically circular. Historically, Makar [20] wrote that mount *Swem* where the Tiv people are believed to have migrated has a rock resting on three pillars that, at a distance, looks like a hut. Culturally, the layouts reflect communality where elders meet to discuss and settle disputes. Furthermore, Ogundele [21] finds that their

circular houses reflect nature and God, seen as round and infinite.

The locally available materials for the construction of walls, roofs, and finishes of the Tiv people of central Nigeria comprise earth, stone, thatch, bamboo, and other wooden materials. The walls of the Tiv hut are made in the form of solid masses or moulded into sundried adobe bricks before construction. The mud used for bricks and binding is specially selected from clayey sub-soil. However, Ohiaeri [19] notes that the bricks could be of any dimension as there is no standardisation in the traditional architecture of the people.

Openings are made mainly as doors and windows. The Tiv indigenous buildings generally have one doorway, provide at least one step above the building floor level, and continues to the desired height of the building [15]. The door's step prevents insects and reptiles' entry and stops the entrance of run-off water in flooded rainfalls. One window is usually deemed sufficient for a house, but for perfect cross ventilation, two windows are also provided on opposite sides in some houses to get enough air during the hot season. Occasionally, screen walls are used on less important buildings like kitchens, toilets, barns, and others [21].

Once the circular wall construction is completed, the roof framing commences. The typical roof of the Tiv hut is of considerable height, making the construction difficult at higher levels without a scaffold. The roof initially consists of three to five main forked posts carrying a platform with three to six workers. The roof framing continues with additional heavy poles or bamboo posts positioned between the primary forked posts and tied into rings made from exceptional wooden climbers [19]. Once the roof is completed separately, many people are mobilised to lift and place it on the constructed cylindrical wall carefully.

The framed conical roof is usually covered with bunches of spear grass, carefully knitted in a long continuous mat. The spear-grass (Imperata cylindrica) is generally seen as a better indigenous thatching material in Tiv [15, 19]. Laying the thatch cover is done by placing the material in lapping spiral layers, starting from the bottom of the roof frame and working upwards to the roof apex. The roof's peak is usually protected with a specially made pottery cover.

Flooring is laid using carefully selected clayey soil, spread flat inside the house, sprinkled with water, and stamped underfoot by many people [14]. Sometimes the earthen flooring is finely pulverised to a polished-level appearance by plastering with special cow dung or extracted products from locust bean fruits. The wall's inner and sometimes outer surfaces are plastered smooth with specially selected clayey soil [8, 19]. In some cases, soil obtained from anthills is used for this purpose because of its smooth texture and painted with a solution of white ash gotten from burnt wood or grass.

A typical Tiv village setting consists of many compounds surrounding an open square with trees and stockades where people work. The Trees are often planted in harmony with the overall shape of the compound [19, 22]. Most Tiv compounds are surrounded by fruit-producing trees such as mango, orange, cashew, pawpaw or papaya, and guava. It is common to see other economic trees like palm, coconut, pearl, kola nut, and banana in the most southerly parts. The houses are often interspersed with many trees, forming a beautiful, lush landscape.

Beneath the tall domestic trees are found numerous gardens with various vegetables and other fruits plants such as pepper, tomato, okra, garden egg, fluted pumpkin, spinach, jute

mallow, and others for household consumption and even income generation [23, 24]. During the rainy season, one is greeted with crops around the house like corn, maise, groundnut, potato, and even yam, providing an immediate supply of food in emergencies, supplying copious clean air and green vista as one approaches homes.

Attachment to values of cleanliness, Tiv people also plant beautifying flowers at strategic positions around their local houses [25]. The people often have a beautiful lining of decorative stones close to house entrances and define walkways in private and public spaces such as schools, clinics and worship places. Shallow clay pots are also conspicuously placed around the compound where water is poured for drinking by domestic animals like goats, chickens, and others.

2.2 Conceptual framework

The conceptual framework for this study is built on Rapoport's determinants of house form, Maslow's theory of human motivations, and Gutman's means-end chain model, all of which are somewhat concerned with exploring human needs and values. The study also examined the relationship between the three theories and other variables in eliciting and defining the motivating factors for indigenous house form.

In studying the determinants of house form, Rapoport [9] investigates the underlying theoretical constructs that have influenced, and continue to affect, the built environment, including religion, beliefs, conventions, and socio-cultural influences, among other physical elements, as illustrated in Figure 2. The study was founded mainly on the intellectual discourse about the meaning and qualities of folk, primitive, and vernacular structures on one side, and contemporary architecture on the other, examining the potential of establishing a blended continuity. In their review, Adedeji and Amole [26] compliment Rapoport's balanced conclusion that "house form is not merely the product of some physical forces or any single causative elements, but rather the consequence of a complete spectrum of socio-cultural influences understood in their broadest terms."
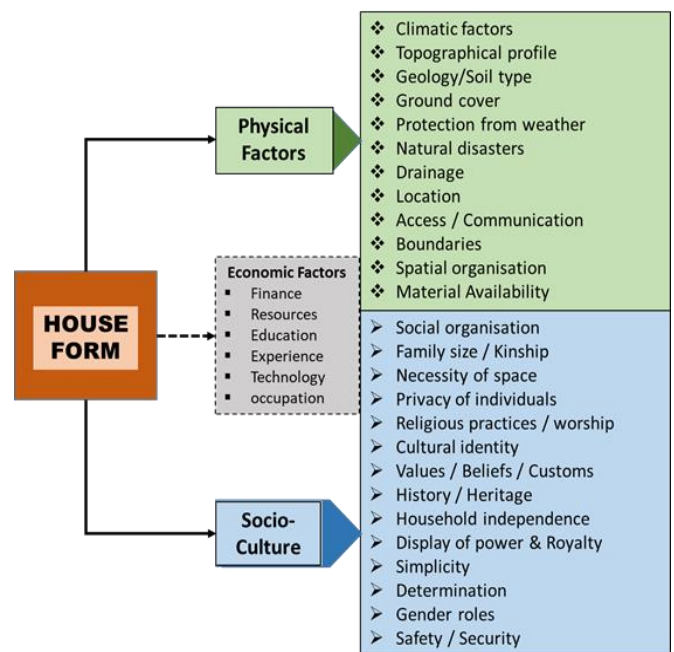

Figure 2. Physical and socio-cultural factors of indigenous housing form. Conceptualized by authors [7, 9, 27]

Though the secondary placement of the physical aspects such as climate, topography, materials, and techniques, among other considerations, have been put into question [10, 27] based on the premises of scope, dependency on secondary sources, and the position on geographical and temporal homogeneity. Rapoport's critics differ that house form determinants vary amongst groups based on geography, heritage, and living situations; most scholars agree on the human freedom of choice in creating dwellings that satisfy expanding socio-cultural demands of the family. One could further ask if the human choices are universally applicable or are somewhat context-specific.

In the theory of human motivation, Maslow [11] stresses that people are motivated by physical, socio-cultural, and even psychological factors to obtain some desired comfort level. Human needs, according to Maslow, are structured in a hierarchy, with the most urgent bodily requirements such as air, water, food, shelter, sleep, clothes, warmth, among others, placed at the bottom. Ironically, the least demanding psycho-social needs like love, esteem, and self-values are placed at the top priorities [28-30]. Accordingly, as humans have intrinsic aspirations to acquire the most fulfilling psycho-social values, the lower-level perceptible criteria must be met before individuals progress to the next step of more abstract demands.

Therefore, it may be observed that the human wishes to actualise their social, cultural, and psychological demands may be the fundamental reason their built surroundings are also increasingly impacted by socio-cultural factors. Both Maslow's broad classification of needs as basic, psychological, and self-fulfilment [11], and the later categorisation of values as having, loving, and being [31], are geared toward filtering concrete desires through functional and psychological feelings, to achieving some desired terminal ends (Figure 3). Though Maslow later enlarged the five-stage Theory of Human Motivation into an eight-stage Hierarchy of Needs embracing cognition, aesthetics, and transcendence, this study is based mainly on the original five-stage theory.
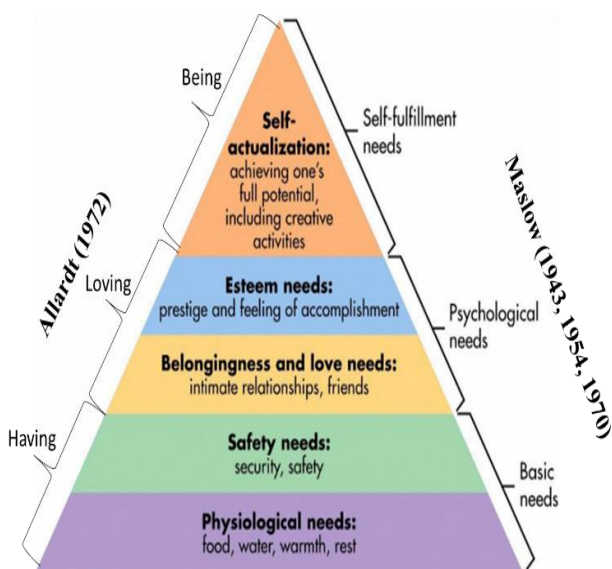
Figure 3. Comparative classification of needs. As adapted by authors [11, 30, 31]

Consequently, the grouping of human needs into three categories: basic (physical), psychological (feelings, utility), and fulfilment (values, accomplishments), are seen to be akin to the MEC theory, credited to Gutman [13]. The MEC ladders

of attributes (A), consequences (C), and values (V) may also serve comparatively as the basic, psychological, and fulfilling needs of the human motivating factors, respectively. As depicted in Figure 4, the MEC theory reveals potent elicitation of fulfilling values in the built environment utilising the attributes, consequences, and values (A-C-V) ladders. In the MEC model, a product may be seen as a specific article that can be touched, such as a building, car, ball, or gadget [32]. It can also be considered an intangible construct that may only be perceived in concept, like assurance program, culture, and others.
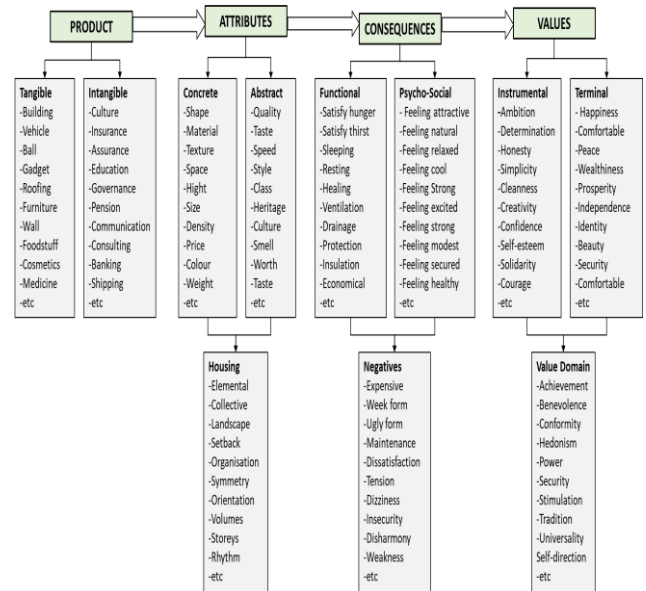
Figure 4. Concise summary of the means-end chain research model. Adapted by authors [3, 33]

On the other hand, attributes describe aspects of a service or product that may be concrete or abstract [34], subject to how the effect is viewed by consumers [35]. They are seen as properties or characteristics of products, goods, performances, or services consumers need. In general terms, attributes have been described, among others, as qualities, characteristics, features, aspects, behaviours, and meanings of goods, persons, amenities, things, or performances desired or pursued by end-user consumers. Zinas and Jusan [32] further divided concrete attributes into fundamental structures and collective spatial linkages in MEC research in the built environment. Abstract attributes in the built environment may be understood as cultural meanings and other social attachments, such as identity and history, recognised by end-users.

Consequences as an intermediary level in MEC analysis may be viewed as the resultant reactionary outcome of people or benefits derived from the consumption of a product. They are believed to be synonymous with customer experiences due to a product's use, which might be of favourable advantages or unfavourable sensations [36, 37]. As indicated in Figure 5, two kinds of consequences may be revealed in MEC analysis: functional utilities and Psycho-social feelings [38].

In MEC analysis, values are elicited at the most abstract research inquiry level. The values may be viewed as personal or societal advantages, defined objectives or permanent needs, and taught beliefs [39]. While shared values unite people in an "informal" societal setting for communal activities such as working, eating, and drinking [40], personal values are self-fulfilling targets for personal comfort, enjoyment, and

happiness. Consequently, values at the top rung in MEC analysis (Figure 5) may be further classified as instrumental and terminal, representing "behaviour" and "being", respectively [38, 41].

Figure 5. MEC Eliciting values comparable to Maslow's hierarchy of needs. As adapted by authors [11, 30]

Following the recommendation by Rokeach [41] for the articulation of universal values, Schwartz [42] derives ten motivational values domains, which also simplify categorisation. They include Achievement (ambition, esteem, success); Benevolence 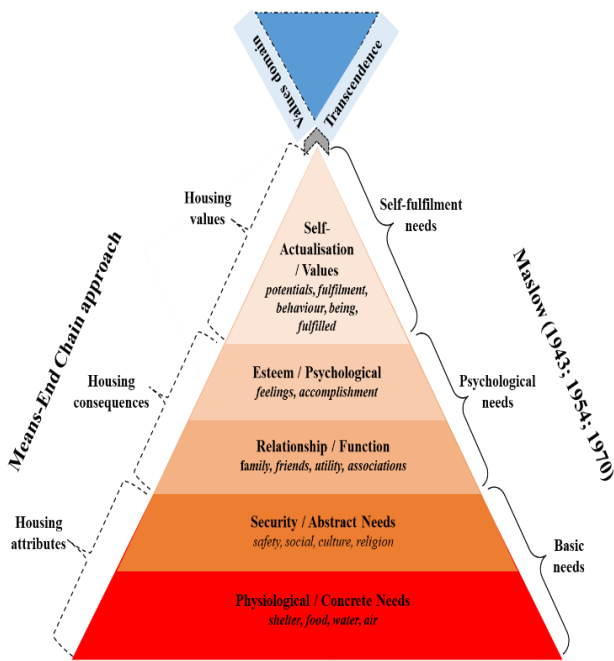(true friendship, charitable, helping); Conformity (self-discipline, respect, politeness); Hedonism (enjoying life, fun, pleasure); Power (wealth, authority, social power). Others include security (cleanness, reliability, family safety); Self-direction (curiosity, determination, independence); Stimulation (exciting life, confidence, daring); Tradition (devoutness, loyalty, modesty); and Universalism (unity with nature, conservation, social justice).

While many practical kinds of field research employing the MEC technique may conclude the exploratory investigations with values of "behaviour" and "being", the domains are typically assigned by the researcher as conventional categories. As shown in Figure 6, the values domains can be equated to the more abstract transcendence level in the hierarchy of motivating needs.

2.3 Research design

This study uses a qualitative method to collect data and analyse it based on the MEC paradigm. A semi-structured soft laddering interview was employed to obtain participants' perceptions, consequences, and values as part of the MEC research technique. Laddering typically comprises at least 30 minutes of one-on-one discussion concentrating on the "why" particular characteristics of a product (house) are significant to the people [32].

For this study, 24 respondents were interviewed, beyond the minimal quantity of 20 participants necessary for a successful MEC inquiry [43, 44]. The Purposive non-probability sampling was adopted, where research participants were

sampled from three local government areas in Benue State, namely Makurdi, Ukum, and Vandeikya. The participants were selected among the indigenous residents, community leaders, local builders, house owners, and women leaders based on their knowledge, experiences, and competencies in the Tiv indigenous housing procedures, meanings, and values.

The soft laddering interview followed a semi-structured method, performed in the Tiv native language. Questions were deliberately phrased for participants to answer in a few sentences, with the researcher taking notes of the attributes, consequences, and values ladders expressed by the participants. From the concrete housing attributes observable in their constructed settings, the participants were initially asked to determine the shape, materials, and setting for the indigenous housing, compound, and village, respectively. For each physical trait highlighted by the participants, further inquiry was made on the more abstract socio-cultural importance, functional utility, psychological sensations relating to communal and personal values. As reported in Table 1, additional questions about the participants' choices and preferences in an ideal shelter were asked. The additional questions were aimed at forming strategies for future housing improvements.

Table 1. MEC soft laddering interview design for participants

Aspect	Filters	Response
	Concrete	Shape, materials, setting
Attributes	Abstract	Cultural significance
	Functional	Use, utility
Consequences	Psycho-Social	Personal feelings
	Instrumental	Behavioural desirability
Values	Terminal	End state actualisation
Choice and preferences	Present Needs	Need for new housing
	Future Needs	Abolished or improved

The soft laddering interviews, conducted in the people's native language, were transcribed and translated into English, then coded and matrixed using NVivo 12 computer software. The themes and patterns identified from the Content Analysis were identified, quantified and graphically presented using word clouds, Hierarchical Value Map (HVM), among other descriptive presentations.

3. RESULTS

The content analysis of the 24 respondents is summarised in Figure 6 to elicit the motivational factors for Tiv indigenous dwellings. From known to unknown qualities [32], housing as a complex product was classified into eight components: wall shape, wall material, roof shape, roof frame, roof cover, compound shape, compound location, and overall village settlement pattern.

At the attribute level, respondents initially recognised the most concrete aspects, including house forms, roof shape, material composition, and compound settings. Furthermore, to explain the "why" of each elicited house component, abstract meanings and practical consequences were discussed, leading to the ultimate values level. As shown in Figure 6, the responses were coded into nodes in hierarchical order, then displayed in a word cloud using the NVivo 12 computer program. The word cloud presentation was preferred to capture vast themes too numerous to be shown in bars or charts.

Figure 6. Motivating factors in Tiv indigenous house form elicited from the MEC attributes, consequences, and values

The results were also presented graphically using the Hierarchical Value Map (HVM), picturing the MEC network of connections called ladders, as shown in Figure 7. A ladder may be understood as responses generating linear or branching linkages produced in a MEC interview. Elicited elements are valid when they have four direct connections from the 24 research participants [38, 43].

Figure 7. Hierarchical value map connecting attributes and values in Tiv indigenous housing

The HVM uses different-sized arrows to depict the strength of connections, with thicker outlines denoting more significant ties [36]. Generally, associations with less than four interconnections are considered insufficiently strong to be mapped. While connections with four to nine links are deemed moderate, those with ten or more are extremely strong. The mean frequency of mentions accompanies the directed arrows, expressed as a percentage of connections in a specific node.

4. DISCUSSION

As illustrated in Figures 7 and 8, the findings demonstrate a broad diversity of responses to the probing questions on "why each housing attribute was essential to the participants." The mapping was constructed by taking the average responses to

the eight housing components: wall shape, wall materials, roof shape, roof frame, roof cover, compound shape, compound sets, and settlement pattern. According to the responses, the Tiv dwellings' round form generally symbolises their cultural heritage, which, coupled with the circular compounds, enables the people to move freely in their natural surroundings. Their compound settings illustrate the people's communal determination and desire to survive and live independent lives with some level of privacy in each household unit.

Specifically, the results from the abstract attributes of this study, highlighting the meaning of cultural heritage, align with the historical accounts of Makar [20] and Ndera [45] that the Tiv circular dwellings originated at *Swem*, with a rock resembling a hut from a distance. This study's findings also somewhat support the earlier discovery by Ogundele [21] that the Tiv roundhouses are said to be influenced by the cosmic nature of the universe.

Though some previous studies of Tiv compounds settings identified communality, fairness, and equity (egalitarianism) as the most important motivating values among the people [2, 46] a closer look at the individual housing shapes and materials reveals more complex "determination" behaviours that encompass a lot more. At the same time, the compound and village setting reflect the people's communal nature. The circular-shaped walls reflect natural infinity, just as mud, thatch, and bamboo materials reflect the people's creativity, conservation, and ambition, expressing their unwavering determination to survive and live independently, as ranked in Table 2. The ranking was based on respondents' direct mentions, linking one ladder to another.

Furthermore, unity and communal living fall into the "behavioural" instrumental values, which are not the terminal "ends" themselves but the means to a valuable "end." As elicited in the study, the responses of unity and communality demonstrate the peoples' determination to unite, struggle, and persevere in adversity, uncertainty and actualise independence as their terminal value of "being". Aboh [24] earlier notes that most new compounds are built following youth's desire for independence and privacy, resulting in their freedom and self-direction. Furthermore, according to Ajekwe and Ibiamke [47], the Tiv people value independence and self-determination and have fought for it since colonial times. Another finding of the study is that their indigenous construction materials somewhat have a temporary and transient character, which require regular maintenance to regulate heat and rainfall.

The "behavioural" and "being" values of communality, determination, independence, and auditory privacy need to be adequately harnessed and celebrated in planning and designing housing and general infrastructural development among the people. Coincidentally, these values mainly fall under the primary and secondary universal domains of self-direction and security, which ought to be collectively pursued in future developments among the Tiv people.

On a macro level, the description of Tiv settlements as planned, nucleated, and agglomerated into separate castes [46] may have limited application in more significant compounds, village squares, among other peri-urban settlements. It is also likely that the "nucleation" condition transpired in the pre-colonial era [21] when the Tiv ancestors occupied hilltops and slopes. Nonetheless, Tiv rural settlements are described in present times as dispersed, scattered, and spontaneous [17, 19], reflecting their socio-economic reliance on agriculture, requiring expansive land for shifting cultivation practices. Though Uji [17] sees prospects of higher productivity and

more secure living when Tiv settlements are delineated and nucleated into clusters. Time and effort must be expended to convince the people of the benefits of such change.

Table 2. Ranking of motivational values, from the number of direct mentions on the 24 participants

ATTRIBUTES				
S/No	Concrete Attributes (CA.)		Abstract Attributes (AA.)	
i	Circular Shaped	23	Culture	17
ii	Separated	22	Availability	15
iii	Mud/Earth	19	Privacy	13
iv	Bamboo Roof	18	Nature	11
v	Dispersed	18	Strength	07
vi	Thatch/Grass	17	Drainage	06
vii	Reed/Cane	05	Infinity	05
viii	Rectangular	04		
CONSEQUENCES				
S/No	Functional Consequences (FC)		Psycho-Social Consequences (PC)	
i	Free Movement	15	Feel Natural	17
ii	Climate Control	12	Feel Relaxed	09
iii	Spaciousness	09	Feel Modest	07
iv	Ventilation	09	Feel Strong	07
v	Protection	07	Feel Cool	05
VALUES				
S/No	Instrumental Values (IV)		Terminal Values (TV.)	
i	Determination	16	Independence	17
ii	Simplicity	14	Comfort	11
iii	Cleanness	11	Safety	07
iv	Creativity	11	Identity	06
v	Conservation	09		

Meanwhile, the scattered settlement pattern of the Tiv people is thought to be tied historically to their dispersal from *Swem* mountain into the Benue valley and their eventual settlements based on patrilineal groupings comprising 'segmental opposition' [14]. Interestingly, their dispersed communities also allow some passive crop cultivation and plantations of certain garden crops and trees, all of which contribute to establishing luxuriant green environments and a steady source of income.
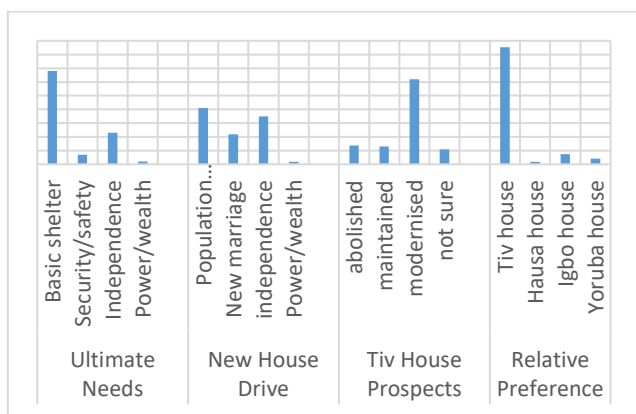
Figure 8. the people's preference to modernise their indigenous homes

Though Tiv houses provide basic comfort to them, the people ascribe the drive for new compound units to the ever-increasing population and the desire of young families to attain some level of independence and privacy. As presented in Figure 8, the majority of the people still prefer that their indigenous homes be modernised and not abolished.

In another development, Isah and Khan [2] note the basic circular forms of Tiv indigenous houses with no noticeable differences in pattern throughout their environments. Although the Tiv huts may seem comparable to some neighbouring ethnic groups [27], there is no sufficient evidence showing they were adopted from the latter. As a consequence of historical precedent and symbolic socio-cultural meanings and values as elicited and presented in this research, it could be shown that the Tiv people created a genuine relationship with their built environments.

In terms of motivational needs [11], it may be seen that the people's creativity, as expressed in their conservative use of available natural materials for construction, their expression of communal living in their natural setting, and their determination for independent living and auditory privacy, all fall within the psycho-social level of fulfilment values. The ideals of self-actualisation transcend further to self-direction as the ultimate values domain, as presented in Figure 9.
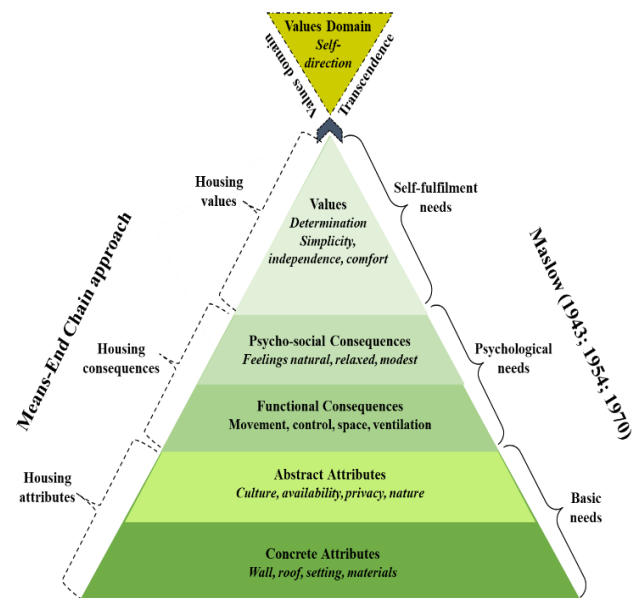

Figure 9. Motivational values for house form using the MEC model

Throughout history, human desires have always been to manage the physical components such as climate topography, among others, to attain certain socio-cultural and psycho-social levels of fulfilment, such as family comfort, space organisations, privacy, and independence, among other social ways of life. Therefore, the enormous desire to obtain the utmost comfort level of needs also corroborates the conclusion by Rapoport [9] that socio-cultural factors have the primary effect on the formation of built environments.

Furthermore, the MEC's practical application in eliciting motivational factors can accommodate distinct "behaviour" and "being" values transcending into the domains. While it is easier to elicit the "behavioural" and "being" values in a practical interview session with participants, they may hardly directly mention the values domains. Like the case of this study, the values domains were not elicited directly on the field but were allocated as universal values by researchers. Therefore, it could be logically inferred that the instrumental and terminal values are not mutually exclusive with the values domains in housing choice and preferences and may coexist in one research inquiry.

5. CONCLUSION

In this study, 24 laddering interviews were utilised to extract meanings and values related to the motivating factors of the Tiv indigenous house form. The results revealed that most Tiv houses are circular with a rounded conical roof built around circular compounds to express their communal setting and allow free movement of people and ventilation between places. The local houses also represent the people's cultural heritage while availing a certain degree of climatic comfort in their natural setting. Finally, the local residences represent the people's determination to live a modest lifestyle in a simple setting, gain some privacy, and ultimately actualise independent living in their compound units. The values of communality, determination and independence transcend to the domain of self-direction as reflected in their built environments. Therefore, the primary values of collective determination, household independence, and auditory privacy of the people need to be adequately harnessed and celebrated in planning, designing, and developing housing and other future structural developments.

Throughout history, humans have sought to exert control over physical features such as climate and topography, attaining some socio-cultural values to satisfy their family size, space organisation, and other aspects of daily life. This study demonstrates that the Tiv people's determination for independence falls under the psycho-social level of esteem and fulfilment, transcending to self-direction. The results corroborate Rapoport's conclusion that socio-cultural values significantly impact housing formation and the built environment.

Future housing constructions among the people should consider the mainstream values of the people to provide some basic comfort and ensure their cultural sustainability. Though this study is limited to the Tiv people, there is a need to explore the inherent socio-cultural values motivating the house form in the varying ethnic nationalities in Nigeria. The purpose is to integrate, articulate, and conceptualise the values into an inclusive vernacular architecture acceptable by the majority. Additionally, efforts should be undertaken to improve Nigerian indigenous communities based on the Sustainable Development Goals ideals, "... centred on a resilient, inclusive harmony, with a special emphasis on the necessities of the poor and vulnerable people."

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