Ratiocination of Kenyan Vernacular Architecture

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Abstract

The vernacular paradigm is a valid but stigmatised field of architectural inquiry. In Kenya, the traditional vernacular architecture of most communities has not been completely rationalised. Documentation has been limited to tribal architecture of the most populous communities and ethnic tribes of academics and students of architecture. However, the documentation has not progressed to ratiocination, as interpretation. This desk study conducts archival research and adopts a qualitative methodology when it undertakes a critical review of identified publications on vernacular architecture. A dialogic approach in the form of short quotations from various sources is employed to situate the study in discourse in the research field of vernacular architecture. The study reviews selected proposals for studying vernacular architecture and argues for the use of broad based frameworks for its analysis. It provides a theoretical background on research methodologies and presents eco-systemic methods of studying vernacular architecture, arguing for its hermeneutic interpretation. The need for chronology, traditions and maxims in ratiocination of vernacular architecture is debated. The influence of conservation organisations is discussed. The study found and proposed methodologies for ratiocination of Kenyan vernacular architecture. It also established that a comprehensive corpus of traditional Kenyan rural vernacular architecture that could support teaching of History and Theory of Architecture in Kenya, and inspire design projects of students and practicing architects had not yet been compiled. The study recommends creation of a corpus of traditional Kenyan rural vernacular architecture through ratiocination of undocumented, or documented but yet to be interpreted built forms of indigenous Kenyan rural vernacular architecture. This corpus will yield requisite hermeneutics and semiology of vernacular built forms, inclusive of their spatial organisation.

Keywords: **Kenyan Vernacular Architecture; Ratiocination; Hermeneutics; Semiology; Interpretation**

Introduction

Vernacular architecture has "great scientific value" with the potential of providing "urban models that are perfectly adapted to social needs" without a negative impact on the future (Gil-Piqueras & Rodriguez-Navarro, 2021: 1). Although studies within the vernacular architecture paradigm were previously stigmatised, they achieved academic recognition as valid areas of architectural theoretical discourse through seminal publications like *Architecture without architects* (Rudofsky, 1964); *House, form and culture* (Rapoport, 1969); *African traditional architecture* (Denyer, 1978) and *Vernacular architecture* (Turan, 1990). These studies dispelled, to a large extent, academic marginalisation of the paradigm, especially by institutional (mainstream) architecture (Atkins, 2008: 1).

Vernacular architecture confers identity upon a region because it is place-specific (Karahan & Davardoust (2020, 490), and "is not susceptible to replication" due to its site dependent nature (Sayigh, 2019: 425). Apart from stigmatisation by mainstream architectural practitioners, research within the vernacular paradigm faces prevalent challenges indicated by "a dearth of written literature and scarcity of archaeological records" (Oloo, 1969: 3), which makes "oral [as well as building] traditions the most appropriate method of inquiry" (ibid), for conducting primary research within the vernacular paradigm. Oral sources based on extensive field investigations through interviews with sages were used in the compilation of works such as Ayot (1973); Ayot (1977); Ndisi (1974); and Ocholla-Ayayo (1976). These sources are now readily available for interpretation.

In Kenya, Ralwala (2017) brought to the fore, various aspects of Luo traditional architecture that were hitherto unknown within Kenyan architectural academia, including typologies of settlement in the form of archaeological relics like *Thimlich Ohinga* and *Gundi Buche*; ancestral mausoleums such as *Kibaga* (Ralwala, 2016)*;* and their central function in maintaining social order within the community. Such studies ensure that cultural knowledge is preserved for consumption by future generations of the Luo and other Kenyan communities at large, thereby preventing cultural loss (Ayot, 1973). The studies also expand debate, in Kenyan architectural academia, by exposing a new area of discourse—the interpretation and reconstruction of the semiology (inherent meanings) of cultural landscapes (Bakker, 2007: 20). The objective of conducting such studies is to create, through ratiocination, a corpus of traditional (rural) Kenyan vernacular architecture from the pre-colonial period to the post-colonial present. This corpus will support the teaching of History and Theory of Architecture in Kenyan Universities. The corpus will also inspire design projects in the architecture studio, for both students and practicing architects.

The vernacular architecture of most Kenyan communities has not yet been completely rationalised. The vast literature focuses on the traditional architecture of the most populous communities in Kenya. Documentation of built forms in the rural vernacular paradigm has been conducted by students and architects who belong to the

ethnic communities under investigation. Such insider studies are often rich and dense, because they are presented from the positions of participants in the culture under study. The majority of these studies have not yet progressed to the second ratiocination level of interpretation. Strategies of documenting hitherto unstudied Kenyan vernacular architecture abound in the theses and dissertations of students in Kenyan universities, and can easily be adapted for application to a new context when necessary.

However, strategies for ratiocination of almost the entire Kenyan rural vernacular architecture are scanty and have not yet been brought into the public domain. It is this research gap that this paper intends to fill. If the ratiocination of Kenyan vernacular architecture is not undertaken in the near future, most of this architecture will be lost through the death of the remaining community sages, and irreversible transformation of the built forms in the rural cultural landscapes. This desk study, through archival/ library research, therefore provides a methodological framework as a strategy for ratiocination of Kenyan rural vernacular architecture, which will enable hermeneutic (subjective) interpretation that should eventually yield semiology (inter-subjective or objective meanings), for holistic comprehension of this architecture.

Methodology

The study adopts a qualitative methodology and through a desk study, undertakes archival research in the form of a critical review of identified works on vernacular architecture pertaining to the topic under discussion, as a descriptive and interpretive analysis. A dialogic approach that presents deliberate short quotations from various sources is employed from the outset, to situate the study as a component of ongoing discourse and debate in the research field of vernacular architecture. This approach is deemed fruitful as it does not stifle multiple voices in the terrain of discourse. Following upon the writing style and methodology of Amatsimbi (2021) in *Remembering the Phelp-Stokes Commission Report in Kenya: Historic Recurrence and Lessons from the past*, the study does not provide a discussion on its justification, significance, limitations, assumptions, delimitations and exclusions. The reasons for the omissions will be discernible to the reader throughout the paper. Moreover, the discussion is embedded into, rather than separated from, the literature review in order to highlight and support the adopted positions at the relevant places in the study.

An individualised broad based framework for analysing vernacular architecture

In *An approach to the study of environmental quality*, Amos Rapoport (circa 1970: 8) observes that "at this stage of development of our field, the need will be for each research worker to develop his own methods", a position consistent with the search for a relevant methodology and analytical framework that is proposed in this study. This personal method should "be explicitly stated" (ibid), providing "a reliable system for categorizing various characteristics" (ibid), for use by other researchers in an attempt to discern the emergence of any consistency

with regard to methodology (ibid). The commonalities within the adopted approaches should then constitute a standard method of vernacular architecture research, in future studies, that can be adapted to any cultural context in Kenya.

Rapoport (ibid) proposes the employment of "observational and indirect methods", towards the analysis of "indirect material" that includes oral traditions, literature and pictorial sources (ibid), integrated with the "analysis of physical environments" (ibid), and this should provide a holistic presentation of any cultural landscape. Critical to this proposed framework are three underlying questions pertaining to identification of "characteristics of people as individuals and groups" that determine shaping and understanding of built form (Rapoport, 1976: xi), how the physical environment influences people and to what extent (ibid), as well as exposure of the connecting mechanisms between people and their environments (ibid). Hence the analytical framework for studying vernacular architecture should focus on both material (direct) and intangible (indirect) cultural aspects, to provide a holistic explication of built form on the basis of mutual, symbiotic or reciprocal relationships between people and their environment (especially their cultural context).

Vernacular architecture "research must be interdisciplinary" (Steyn, 2003: 181), in recognition that "work on the historical dimension, the theory of settlement, socio-cultural factors, contextual considerations and organisational systems"—contemporary topics in the vernacular domain—"require the involvement of other sciences, including anthropologists, archaeologists and historians" (ibid), as prevalent architectural research "lacks the hard scientific edge of, say, archaeology or anthropology" (ibid: 182). Although vernacular architecture exhibits "richness of form, textures and types" (ibid: 181), rigorous theoretical analysis and evaluation is largely absent because "the taxonomy is still immature and the analytical criteria Eurocentric" (ibid). The blame on Eurocentric criteria is debatable as the "qualities of good settlement tend to be universal" (Steyn, 2006: 24), and this necessitates the fusion of Eurocentric analytical criteria with contextually appropriate cultural content for a more effective probe. This approach is proposed in this study with respect to the analysis of traditional built forms of Kenyan communities, recognising that architecture is "shaped by rational, symbolic and psychological factors" (ibid, Steyn, 2003: 182), and thus requires a broad based theoretical framework to explicate it.

A brief review of selected proposals for studying vernacular architecture

Apart from the methods that were briefly mentioned above, Paul Oliver (2006: 6, 7) proposes a tripartite investigation strategy that utilises the anthropological method to record or document technology and technique, materiality, nomenclature, function and symbolism of built form (ibid: 6); the archaeological method to analyse "long vacated sites" and "early forms" of vernacular architecture (ibid: 7), despite the possibilities of misrepresentations or approximations (ibid); and historical

documentation through analysis and interpretation that achieves recording and reconstruction of built forms (ibid). This tripartite proposal indicates that reconstruction of past spatial organisations and cultural manifestations in built form are valid research undertakings, and may thus proceed, despite any contestations and challenges that may result from the inherent hermeneutic interpretation, as a method of architectural explication that is anchored in a specific cultural ecology.

Clifford Geertz (2000 [1973]: 15) reveals the shortcomings of the anthropological approach, categorising them as second and third order interpretations (ibid), further observing that "only a 'native' makes first order" interpretations as "it is his culture", an indication of the greater validity of an insider perspective in generating interpretations of a culture due to extensive familiarity and participation in it. In line with Geertz's argument, this study recommends that Kenyan architects study the vernacular architecture of their indigenous communities to enable the compilation of a corpus of such cultural heritage, as has been done by academics like Ochieng' (1999), Rukwaro (1997), Kamenju (2013) and Ralwala (2017).

Geertz (ibid: 25) proceeds to propose a "disconnected yet coherent sequence" or research that he classifies as "cultural analysis", which is perceived to be rewarding because "previously discovered facts are mobilized" and "previously developed concepts are used" (ibid), in a manner that does not progress "from already proven theorems to newly proven ones" (ibid), but rather from "the most elementary

understanding to a supported claim" (ibid). This approach is deemed suitable for vernacular architecture studies, when each study assesses itself on the basis of congruence between the adopted research methodology and the achievement of the research objectives, as well as during discussions on the extent to which the Main Problem and Sub-problems of such studies have been solved by their Main hypothesis and Sub-hypotheses. Since "cultural analysis is intrinsically incomplete", and "the more deeply it goes, the less complete it is" (ibid: 29), opportunities for further research, with regard to Kenyan vernacular architecture should be presented as well, to enable future studies in the research field to continue this discourse, dialogue and debate. Cultural analysis is also evident when Rapoport (circa 1970: 3) describes it under "the traditional historical methods" which involve "scrutinizing the material, putting it into some order and drawing conclusions" from the emergent patterns and regularities (ibid). Such ordering demands critical selection through omission of built forms that are not seminal in terms of cultural manifestation in search of a sustained fit with contextual cultural ecology. The study of cultural landscapes is incompatible with the objectivity that arises from chronological sequences that portray "evolutionary progression" (Fabian, 1997: 19), which is "not 'meaningful'" (ibid). However, chronology can still inform subjective research and this can be evidenced by structuring vernacular architecture studies using historical timelines that indicate the significant epochs in the traditional cultural landscape.

Theoretical background on research methodology in vernacular architecture

This section provides a synopsis of the various theoretical considerations that have been selected and identified to support the proposed research methodology for studying vernacular architecture.

Roderick Lawrence (1990: 219) observes that "it is not unreasonable to expect a diversity of interpretations" in the analysis of the vernacular architecture of a given context, while Arthur Barker (2012: 46) states that vernacular "interpretation is flexible". Typical vernacular architecture studies, with a cultural and historical focus, are no exception, as they are often heuristic, and based on eco-systemic research design strategies. Lawrence (1990: 225) further argues that such research must be "interpretive rather than objective", and "focus on social processes including activities and behaviour" while being "grounded in a precise geographical and historical context" (ibid). This argument validates the proposed focus of future studies on Kenyan vernacular architecture, premised on traditional community culture, with the aim of providing hermeneutic interpretation and reconstruction of built forms and spatial organisation.

Lawrence (1990: 220-222) outlines seven methods of studying vernacular architecture. The "aesthetic/ formalist interpretation" does not focus on "meaning and function" of vernacular settings (ibid) and "evolutionary theory" emphasises chronological progression (ibid). These are therefore incompatible with, and inapplicable to studies that are not developed on the basis of chronology. However, the "typological approach"; "social and geographical diffusionism"; "social explanations"; "cultural factors" and an appropriately adjusted "physical explanations" will be useful in developing the analysis of the culture and architecture of indigenous Kenyan communities (tribes).

Lawrence laments at vernacular architecture research which "isolate specific variables from their context and fail to examine the reciprocal relations between them" (ibid: 255), and proposes a "conceptual model" that can "account for all the variables" and their reciprocal [mutual, symbiotic] relations through integrating physical, societal and human aspects and their constituents (ibid). This holistic approach implies the need for qualitative rather than quantitative research, to effectively address underlying pertinent semiological issues, with different weightings assigned to each tier within the conceptual model, in relation to a specific cultural context.

Carolyn Kenny and Barbara Wheeler (2005), claim that design strategies in qualitative research focus on a naturalistic inquiry, within "natural or real-world settings" and contain an inherent "design flexibility", implying that the research design "may change based on the information that emerges and what the researcher learns during the research process". This position is applicable to future Kenyan vernacular architecture studies, whose outcomes will often not be clearly visible from the outset, because of the heuristic nature of these studies. This flexible mode of operation indicates that future

researchers will need to pursue new areas of investigation as and when they emerge. The redirected pursuit should take advantage of what was learnt in the earlier stages of such studies.

Research may be broadly categorised as positivistic (and quantitative), or antipositivistic (and naturalistic or constructivist) (ibid). Although mixed methods research may be performed, "combining positivistic and non-positivistic paradigms is fraught with problems due to the different belief systems" (ibid). Table 1 below summarises the differences between the two approaches.

Table 1: Differences between qualitative and quantitative research

Research type	Positivistic (Quantitative)	Naturalistic (Qualitative)
Reality	Focuses on "a single tangible reality that can be broken apart" (ibid), into independent tiers for further analysis.	Perceives the research task as based on "multiple realities that can be studied only holistically" (ibid).
Causation	All action is based on a cause that precedes or is simultaneous with the effect.	Considers a dynamic nature of cause-effect relationship in which "it is impossible to distinguish causes from effects" (ibid).
Values	The research is independent of any values.	The research is bound by contextual values.

Note: Adapted from Wheeler & Kenny (2005). Future Kenyan vernacular architecture studies must be anchored on culture because it provides unique contexts that can be analysed holistically without recourse to broad generalisations with reference to other contextual settings, in line with qualitative research principles as outlined in Table 1 above (ibid; Ruud, 2005).

Eco-systemic methods of studying vernacular architecture

The preference for an eco-systemic research approach from the outset, is justified by considering the culture of each indigenous Kenyan community as "a system" that demands a "systemic epistemology", in order to avoid the errors that arise from the application of traditional methods of scientific research, namely: "one cause, one effect", to an ecosystem that is circular, and contains "even more complex chains of determination" (De Shazer, 1982: 1, 2). This prevalent circularity implies that the "effects of events at any point" within the system (culture) may be extensive to even "produce changes [perceived as architectural transformations] at that point of origin" (ibid: 2; Ruud, 2005). Eco-systemic epistemology is a subset of Systems Theory which "emerged in response to the classical or scientific model that imagined and studied factors in isolation" (Ruud, 2005), indicating that its application may result in a richer and denser multi-layered cultural interpretation, as a valid alternative.

Eco-systemic research is synonymous with qualitative research as it is "interdisciplinary, transdisciplinary and sometimes counter disciplinary" and this is evident in its "multi-paradigmatic" focus, which is achieved by embracing "the multimethod approach" in order to provide an "interpretive understanding of the human experience" within a given culture (Wheeler & Kenny, 2005). This is consistent with "non-positivistic historical research" which seeks to provide "a perspective on the past" rather than focusing on the underlying truth (Wheeler, 2005).

Valerie Janesick (2003: 67) describes eco-systemic research as crystallisation, which "recognizes the many facets of any given approach" and "incorporates the use of other disciplines…to inform our research processes" in order to "broaden our understanding of method and substance". On the other hand, Mete Turan (1990:15) justifies the adoption of eco-systemic research on the basis of "philosophical problems associated with vernacular architecture" which makes it inevitable to analyse anthropological, social, psychological, and environmental aspects in order to achieve a meaningful contextual synthesis.

Recognising that vernacular architecture research should be conducted in an eco-systemic manner, Lindsay Asquith (2006: 130) proposes "integrated approaches" that are not "exclusive to each discipline" and can therefore "result in innovative theory" because vernacular architecture "is a subject without a discipline" (ibid). This approach is therefore proposed for uptake in future studies on vernacular architecture. Table 2 summarises the quadripartite approach to studying vernacular architecture as proposed by Asquith (ibid).

Table 2: An ecosystemic method of vernacular architecture research

Approach	Focus	Premise
Anthropological	Examination of spatial and activity patterns that are "universal to a culture" (ibid).	Buildings are artefacts that symbolise their cultural context, and should be analysed "within boundaries of cultural knowledge" (ibid).
Sociological	Analysis of communal spatial and activity patterns derived from "daily routines and rituals" (ibid).	Enables the "interpretation of idealized cultural concepts" sourced from the anthropological approach.
Behavioural	Recognition that "individual spatial behaviour" arises from "cultural or social traits" (ibid).	Exposes "perceptions, interactions, relationships" and individual identity within community culture.
Architectural	Analyses spatial type and how it results and determines spatial use (ibid).	After a critical examination of physical spaces based on the other approaches, a synthesis is achieved.

Note: Adapted from Asquith (2006: 130, 131).

For Rapoport (2006: 180), research that focuses on individual buildings is insufficient because the researcher operating in the field of vernacular architecture "needs to study systems of settings within which systems of activities take place", and this is perceived to be a more fruitful approach because it indicates "how environments communicate meaning" thereby creating and reinforcing architectural identities (ibid: 183).

Hermeneutic interpretation of vernacular architecture

A hermeneutic explication of Kenyan culture and architecture must be at the core of such studies. Turan (1990: 14) credits Mc Cleary with incorporating "hermeneutics to building activity" in the form of "hierarchical levels of interpretation". This tripartite interpretive model proceeds through 'explanation', 'evaluation' and 'expression', focusing on "problem solving and the relationship between parts"; appropriateness of the context in terms of design; and revealing "the deep structures of our relations to the world", respectively (ibid). This fundamental approach to hermeneutic interpretation is therefore proposed for adoption and inclusion in the methodologies of vernacular architecture research.

Even Ruud (2005) presents the claim that "all research in some way involves interpretation" and this implies hermeneutics. He categorises hermeneutics as objectivist or alethic, on the basis of their concerns: distinguishing between "subjectivity of researcher and object to be researched" and "the revelation of something hidden",

respectively (ibid). Within hermeneutic epistemology, the recurrent dialectic of the part and the whole is insoluble because "the meaning of a part can only be understood when seen in connection with the whole" but one may "only understand the whole through its parts" (ibid). Hermeneutic interpretation thus portrays an inherent circularity, which may be described as a "hermeneutic circle" or "spiral" (ibid). The 'whole', described as Gestalt perception or psychology, will be the "cultural context" (ibid), of the vernacular architecture of a given Kenyan community, including its ecology.

Alethic hermeneutics recognises that research is informed by one's "pre-understanding of phenomena", and therefore empathy is a prerequisite for the "interpretation and understanding of a [cultural] text" (ibid). This provides justification for studies which are conducted by an architect on the culture and vernacular architecture of his or her community. Future studies in this research field will also take cognisance of objectivist hermeneutics which requires that community culture "must be understood in its own terms, from its own immanent standards and criteria or from the original intentions" of the participants in the culture (ibid). Hence the need for such research to focus on the perceptions and thoughts of key community personalities including sages, academics and politicians.

"Grounded theory and ethnomethodology" research activities study "empirical material" thereby portraying a reliance on the "phenomenological approach" (ibid). Future studies in this field should also be sympathetic to the phenomenological method, where "experience becomes the point of departure", while searching for the "essence" (known as the Husserlian epoche, which is achieved through the method of de-sedimentation of layered meanings as transcendental reduction) (ibid; Ralwala, 2013: 129). The focus on experience of tribal community culture by its participants and its architectural expressions will be revealed through analysis of selected tribal customs and practices, rituals and taboos, legends and myths, community ethos, philosophy and world view, and the greater cultural ecology at large.

The inherent meanings that are visible or concealed within the vernacular architectural heritage of individual Kenyan communities should also be presented as semiology. This is a term that was coined by Ferdinand de Saussure, and is also referred to as semiotics or structuralism (Ruud, 2005). Structuralism perceives architecture "as a system or structure of ideas and practices, models and methods" (ibid), and this understanding should be taken into account in future studies in this domain. Selected case study artefacts should each be considered as a "system of signs" (ibid), in an attempt to reveal "the reality behind the surface" (ibid). Charles Sanders Peirce classifies a sign as an index (a symptom or cause), an icon (representative image) or a symbol (ibid). This classification should be applied to Kenyan vernacular architectural artefacts of each community (tribe) to yield richer hermeneutic explication.

Though subjective, future studies should be critical where appropriate in order to avoid categorisation as cultural romanticisation.

However, their approaches must be different from that of mainstream emancipatory critical theory which is only interested in "critically disputing actual social realities and ideologies" (Alvesson & Skolberg in Ruud (2005)). The aim of transforming society was a key failure of the modern architecture paradigm (commonly referred to as modernism), hence critical theory's "emancipatory interest" of subjecting "societal conditions" to "radical change" (ibid), is incompatible with the premise of the proposed future studies in Kenyan traditional vernacular architecture. However, the "historical-hermeneutic interest" of critical theory and its focus on "language [architectural], communication and culture" as well as "significations and meanings" (ibid), will be vital, in order to achieve a more rigorous hermeneutic interpretation of the indigenous culture of each Kenyan community (tribe).

Experimental research methods are unsuitable for such future studies because they involve comparisons of two or more similar groups based on an independent variable, "under controlled conditions" (Prickett, 2005). The use of statistical analytical tools within this category is indicative of a positivistic premise, which leads to a quantitative rather than the qualitative research approach that is being recommended for uptake by future vernacular architecture studies.

In the development of the requisite theoretical and interpretive framework, future studies will need to take note of existing ethnographic studies on each Kenyan tribe and its particular culture.

However, the limitations of ethnography as a method must be taken into account because ethnography remains "a narrative of observed events and descriptions by informants" prior to interpretation "with respect to cultural, social and other concepts" (Lawrence, 1990: 222). Future studies should provide a hermeneutic interpretation of content derived from such ethnographic sources, in order to achieve a holistic explication of indigenous tribal culture and architecture.

The need for chronology in vernacular architecture

From the outset, future investigations in the field of Kenyan vernacular architecture should by design choose not to proceed chronologically, due to recognition of the pitfalls and shortcomings of the chronological research method (see Ralwala (2019)). Studies that are situated within the vernacular architecture paradigm are incongruent with "development that is linear and progressive within time and space" (Turan, 1990: 16, 17). This argument is consistent with Rapoport (1969: 15), who asserts that vernacular buildings are "basically non-chronological in nature". Chronological (linear) interpretation is synonymous with "evolutionary fatalism" as it may lead "to a romantic view of history without basis" (ibid). The traditive nature of vernacular architecture implies that its essence has persisted from one generation to the next; hence a chronological description is not a prerequisite for its analysis and evaluation. Differences in vernacular architecture are attributed to "differences in culture, rituals, ways of life, and social organization, climates and landscapes, and

materials and technology available" (Rapoport, 1969: 15). Therefore, future studies should focus on these aspects of tribal community culture and physical context rather than chronology, although key epochs in the cultural setting of each Kenyan tribe should be presented using a historical timeline in order to facilitate contextualisation of architectural developments, modifications and transformations that may be attributed to each milestone or epoch in the timeline.

Traditions and maxims in the analysis of vernacular architecture

Vernacular traditions "should be the starting point of analysis" in the explication of vernacular architecture (Vellinga, 2006: 81; Barker, 2012: 46). Vernacular architecture is a "cultural process" and not "merely a material product" (Asquith & Vellinga, 2006: 19), and the constituent traditions should be viewed as "creative processes through which people, as active agents, interpret past knowledge" (ibid: 7). The approach of using traditions in the analysis and evaluation of the semiology of 'tribal' architecture, is timely and consistent with addressing the *lacuna* in Simon Bronner's (2006: 28) observation that "tradition as an explanatory concept has not been more applied to building [architectural analysis]" because vernacular architecture researchers choose to focus on individual "building[s] as text rather than event or process". Lewcock (2006: 203) follows upon the assertions of Erwin Panofsky that tradition and conceptual thinking are two influences that create innovation and change within the vernacular. Lewcock further asserts that "works of architecture naturally reflect the mental models that formed them" (ibid: 200). Recourse to tradition by future studies in the field will thus be attempts to expose and describe the mental models of tribal sages, whether alive or part of the living dead (those who are deceased but whose thoughts are still in the memory of the living). For Lewcock (ibid: 203), tradition yields "generative concepts" which are vernacular archetypes (ibid: 206, 209), exemplified by the cave (ibid: 206); the courtyard (ibid: 209) and the hearth (ibid; 210). Future studies should then attempt to reveal the existence of such archetypes, if any, within the Kenyan tribal architectural heritage (see Ralwala (2019)).

The challenges of exposing tradition within Kenyan tribal architecture are acknowledged from the outset. Mazrui (1977: 36) argues that "there are occasions when in fact it might even be impossible to disentangle what is truly traditional from what is [merely] an external influence". Nevertheless, it is impossible to ignore tradition in vernacular architecture research as these traditions represent "a resolution of the conflicts of constancy and change inherent in vernacular processes", enabling "the importance of historical precedent to be retained" (Barker, 2012: 47; Asquith & Vellinga, 2006: 19). For Asquith and Vellinga (2006: 7), "tradition invites commentary and interpretation and is often negotiated"; tradition is often dynamic, being "generated through a continuous and dialectic interplay of stasis and change, precedent and creativity, stability and innovation" (ibid: 19). However, for Bilgi Denel (1990: 166), traditions and maxims are design determinants which must be understood and distinguished from each other

because with regard to vernacular architecture, traditions are regressive, while maxims are progressive (ibid: 172). Denel (ibid: 165) is passionate about achieving an understanding of vernacular architecture even at "the expense of scholarship and proper methodology" and "even at the risk of being proven incorrect". Denel therefore validates hypothesis formulation on the basis of "observation, assumption, rumours, hearsay, available data and common sense" (ibid: 165). Future studies in the vernacular architecture research field should incorporate these methods in their hermeneutic explication, but they must shun rumours and hearsay because such future studies should seek to proceed in a manner that is consistent with exemplary scholarship and methodology.

Bilgi Denel (ibid: 166- 176) distinguishes between traditions and maxims in the context of vernacular architecture as summarised Table 3.

Table 3: Differences between traditions and maxims

Traditions	Maxims
Propagated through cultural and social continuity as "an inherited and unflinching set of architectural attitudes" (ibid: 165).	"Related to unwritten and unrecorded rules" propagated through many generations (ibid: 165). They are "general and open" to both questioning and interpretation (ibid).
Traditions are strong, incapable of transformation, dictating materiality and method of building.	Acknowledge "personal preferences", which when modified and adopted, induce change (ibid: 166).
Traditions dictate, leading to indoctrination by subjecting vernacular inhabitants to "a set of rules and laws" (ibid: 169, 176).	Maxims suggest and are "accepted by choice and not by force" (ibid: 172, 176).
Traditions are "conditional and tied to punishments" and when entrenched, lead to "mediocrity and stagnancy" (ibid: 168, 172).	Maxims can be questioned, criticised and interpreted, leading to change (ibid: 172). They are "general truths" (ibid).

Note: Adapted from Denel (1990: 166-176).

Upon a critical examination of Denel's distinctions between maxims and traditions, this study draws the conclusion that the line dividing them is rather thin and blurred. Studies such as Asquith & Vellinga (2006) and Barker (2012) portray vernacular traditions as flexible and capable of transformation (as presented in arguments above). Therefore, these studies take a counter position to Denel's association of tradition with rigidity. Consequently, traditions and maxims in relation to 'tribal' culture and vernacular architecture, in future studies, should then not be distinguished. Rather, they should be collectively referred to as traditions.

The influence of conservation organisations

Cultural landscapes are "cultural properties" that exhibit the "combined works of nature and man" (UNESCO, 2015: 72), indicating societal evolution and diachronic growth of human settlements in the face of internal and external physical constraints and opportunities, and other cultural stimuli, including socio-economic influences (ibid). The protection of cultural heritage is managed by various organisations with UNESCO as the umbrella body, whose mandate is to mobilize the "international community to cooperate in the protection of this heritage" (ibid: 3). In this task, UNESCO seeks to ensure the "proper identification, protection, conservation and presentation of the world's heritage" (ibid: 2).

This position indicates that protection and conservation of a cultural landscape, such as that of indigenous Kenyan tribes, are different undertakings. Protection implies the enactment and enforcement of relevant laws to prevent encroachment on and interference with vulnerable cultural heritage. Protection entails "preservation of architectural and cultural heritage by buildings" as these reflect "the needs and values of indigenous communities" (Karahan & Davardoust, 2020: 499). However, conservation implies the maintenance of a cultural landscape to prevent its deterioration and eventual extinction. This study argues for the preservation of the cultural landscape of indigenous Kenyan tribes, and this entails both protection and conservation. In Kenya, The Antiquities and Monuments Act (1983) and The National Museums and Heritage Act

(2006) are examples of legislative frameworks that guide the preservation (protection and conservation) of Kenyan cultural heritage. The National Museums of Kenya is currently undertaking the preservation of some cultural artefacts in Luoland such as *Thimlich Ohinga* settlement relics (a UNESCO World Heritage Site), the Tom Mboya Mausoleum in Lwanda Kamasengre, and Jaramogi Oginga Odinga Mausoleum in Bondo. These artefacts were studied in Ralwala (2017). Artefacts of similar cultural and architectural stature which belong to other Kenyan tribes should be brought to the fore through future studies of Kenyan vernacular architecture.

Findings

As mentioned previously, the study corroborated the findings that although vast documentation of Kenyan vernacular architecture exists, it was skewed in favour of the most populous tribes and ethnic communities of academics and students. A compendium or corpus of ratiocinated vernacular architecture for use in pedagogy with regard to training on History and Theory of architecture was absent. The study also found a methodology for ratiocination of Kenyan vernacular architecture and this is outlined below.

A proposed methodology for ratiocination of Kenyan vernacular architecture

This section provides a synopsis of the research methodology that will hopefully inform and guide investigations in future studies of Kenyan vernacular architecture. The methodology has been developed by extraction from the literature review and the theoretical background on methodology that were presented above, as well as from other studies that pertain to the research topic at hand (Ralwala, 2019).

Without emphasis on their rank or sequence, they include:

1. Formulating a theoretical datum to anchor future studies in the research field of vernacular architecture (Rapoport, 1976a: xi; 1976b: 487; 1998: 2). This should be done in an eco-systemic manner that is characterised by "interdisciplinary description" (Osman, 2004: 1; Steyn, 2003: 181).

2. Speculative reconstruction as hermeneutic interpretation, and this may involve "intervention, insertion or addition" (Bakker, 1999: 198); conjecture (Fisher & Clarke, 2007: 24) and intuition (Frescura, 1985: 284).

3. The employment of ideas that are "freely borrowed from different eras" (Osman, 2004: 2), as well as from other critically selected primary and secondary sources.

4. Examination of the built environment "in its totality" (ibid: 2), indicative of derivation from Gestalt Perception or Psychology.

5. Recourse to the history of tribal Kenyan communities as a vital background for comprehension of concepts and cultural manifestations in works of architecture (Fisher, 2003: 36, 37).

6. Iconological reading of sketches, drawings and photographs, perceived to be objective representations of built forms (Fisher, 2003: 32; Kammeyer, 2010: 15), which are attained through observation, documentation (or illustration) and interpretation (Frescura, 2013 [1980]: 3).

7. Secondary research through critical analysis of archival material to extract architectural content that is relevant to the topic under study (Fisher, 2004: 38), including topics that are derived from history and archaeology (Frescura, 1985: v), in order to describe the "physical and social context" of Kenyan tribes (ibid), thus portraying the lifestyles of indigenous Kenyan communities (Steyn, 2002: 177).

8. Expanding the concept of architectural typologies beyond form considerations (Frescura, 1985: 301-360). Future typologies can also be based on disposition of architectural functions as well as spatial appropriation or organisation.

9. The use of oral traditions as relevant and valid non-academic secondary sources, including proverbs, myths, legends and philosophy of life (Oloo, 1969: 3; Kammeyer, 2010: 15). The content of these oral traditions may provide material that could be deemed relevant in the explication and interpretation of the architecture of indigenous Kenyan tribal communities.

10. The use of selected aspects of philosophy, including phenomenological considerations and perceptions (Kammeyer, 2010: 29, 36, 44), and the concept of African philosophy (ibid: 65), as interpretive tools for comprehension of cultural manifestation in the vernacular architecture of indigenous Kenyan tribes.

11. Primary research based on the concept of philosophical sagacity, which was developed by a Kenyan philosopher, the late Henry Odera Oruka (1990), to generate new knowledge, pertaining to vernacular architecture on the basis of African philosophy. This may be achieved through conducting semi-structured interviews with selected leading architects and philosophers in Kenyan academia, originating from the particular Kenyan tribe whose vernacular architecture will be studied by future researchers.

Conclusions

This desk study employed a qualitative methodology, a dialogic presentation of key arguments in the terrain of discourse and a critical review of archival library research on identified publications to argue for broad based individualised frameworks for analysing Kenyan vernacular architecture. The frameworks will be the means to generating vital hermeneutic interpretation of built forms and their spatial organisation. The case was made for adoption of eco-systemic methods of interdisciplinary investigation that could lead to holistic understanding of such architecture, without emphasis on chronology or distinctions between traditions and maxims. This understanding would then allow the various hermeneutic interpretations to progress into the semiology of Kenyan vernacular architecture as a transition from subjectivity to inter-subjectivity, which is the equivalent of objectivity in humanities disciplines. The influence of conservation organisations such as UNESCO on preservation and conservation of vernacular cultural landscapes was highlighted. Methodological strategies of investigation, presentation and interpretation were proposed as the means for ratiocination of Kenyan rural vernacular architecture.

Recommendations

Ratiocination of undocumented, or documented but yet to be interpreted, built forms of indigenous Kenyan rural traditional vernacular architecture is recommended for uptake by Kenyan architectural academics, theoreticians and researchers. The study further recommends convergence of scholarly research to compile a comprehensive corpus of traditional Kenyan rural vernacular architecture that could support teaching of History and Theory of Architecture in Kenya and inspire studio projects of students and design projects of practicing architects. This corpus will provide requisite hermeneutics and semiology of vernacular built forms, inclusive of their internal and external spatial organisation.

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