

Vernacular Process: Uniting tradition with innovation as a solution for the future of architecture.

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Abstract:

This essay is positioned within the discourse of defining ‘vernacular architecture’, by proposing the hypotheses of viewing it as a process as well as a typology. This regards the everchanging environment in which we live considering social, economic and environmental aspects. By forensically analysing the existing definitions and approaches towards vernacular architecture, particularly the work of Paul Oliver and Marcel Vellinga, as well as the key formal aspects of vernacular construction, I produce a formula which can be applied to evolving cultural and environmental contexts. By translating these elements of the vernacular into a process, I propose a solution to addressing concerns over climate change, growing population, scarce resources and globalisation through conscious design which is adaptable to different regions. The distinction between typology and process has been at the heart of this research to position vernacular architecture as a relevant resource for future architectural design.

This essay studies different elements of modern design and critiques its lean into homogenization and disregard towards traditional methods of craft, referencing the work of Kenneth Frampton and Erwin Anton Gutkind. By focussing on the importance of identity within architecture and seeing the architectural language of a region as a key aspect of its culture, I address the ethnographic discourse which sits within this debate. Case studies have been used as evidence of the applicability and the efficacy of using vernacular processes in contemporary architecture, focusing on examples by Anupama Kundoo, Joe Addo and Diébédo Francis Kéré.

Key words: vernacular architecture, process, climate change, local-orientated, homogenization, ethnographic, contemporary.

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By forensically analysing the various aspects of the vernacular, this essay proposes re-defining vernacular architecture as a process as well as artefact and using it as a key resource which can be applied to the contemporary world to result in a built environment which is appropriate both locally and globally. Case studies will be used to demonstrate the success of following the vernacular process in a contemporary context.

The specific field of vernacular architecture has only relatively recently sparked interest among the industry, especially in being seen as a potential resource in the progression of the future of architecture. The definition of vernacular architecture alone is one still debated amongst many scholars in the field. It is generally defined as a type of local or regional construction, using local knowledge and resources from the area where the construction is based. Many define it as the architecture of the Other (Vellinga, 2005), referring to the people or communities who the construction is aimed at and built by. It is “built to meet specific needs...” (Oliver 2006) and is not built or designed by architects or professionals. Since the publication of Bernard Rudofsky’s “Architecture Without Architects” in 1964, it was common for vernacular architecture to be perceived as an art form or artefact of the past, and it is only since recently that we have begun viewing it as a relevant and contemporary approach. By viewing the vernacular as a process, we can deduce that it focuses on locality including material choices, technical knowledge and anthropological needs, and it is this approach which makes vernacular architecture the correct vehicle to address the concerns of contemporary society.

The distinction between process and typology gives the vernacular an attribute of being compatible with change. The general attitude towards change has always been future/present orientated; using knowledge in an innovative manner to produce new solutions. By focussing on purely innovative approaches, as an industry we have fallen into ocularcentricism and neglect of the natural environment. The option to turn towards learning lessons from the past is often overlooked. However, learning from the past to amalgamate a process gives opportunity to a formula which can be applied to an ever-changing environment, and the formula can be reapplied or reinvented dependant on the time and place of application. Several contemporary architects are beginning to demonstrate this, including Anupama Kundoo, Joe Addo and Diébédo Francis Kéré whose work is used in this essay to defend the applicability of the vernacular process in contemporary society.

In the face of the current global crisis, including the climate emergency, rapid population growth, scarce resources and political dispute in many parts of our world, architects and designers must aim to reduce the negative effect which they have on the environment whilst providing for contemporary needs. The topic of ‘sustainability’ has become more crucial as we become aware of the effect which we have on the world around us, and with it many solutions have been proposed by professions within the fields of science and the built environment. These solutions are complicated, and often solve the issue of ‘sustainability’ at the expense of authenticity and differentiation or respect for traditions. Through the critical analysis of modern architecture, a clear example is shown of how recent attempts at addressing contemporary issues have in fact failed and contributed to global-blandness and a climate crisis, particularly when investigating materiality and composition as well as scale. The work of Kenneth Frampton and Erwin Anton Gutkind is referenced throughout this essay to reinforce how these movements negatively impact the built environment on a local and global scale.

A fundamental aspect of this debate is an ethnographic inquiry into the people who occupy space and the relationship between the ‘dwelling’ and its ‘user’ (Oliver, 2003). Although the fields of anthropology and architecture are seldom addressed simultaneously in academic inquiry, the work of Marcel Vellinga and Paul Oliver has provided a solid academic framework for the basis of this essay. This anthropological discourse addresses the substance of the built environment from the perspective of those who need and use it ensuring these necessities are fulfilled, and conducting this analysis

ethnographically secures preservation of local heritage and how that may inform the structure or materiality of the built environment. The theory of philosophers, including Heidegger and Bourdieu, has been used to provide insight into the philosophy of identity, relating back to the crucial relationship between user and building through an anthropological lens.

Ultimately, this essay aims to critically analyse vernacular architecture and propose its definition and application as a process. Investigation into how this can be reinvented and applied to contemporary architecture is shown through the use of case studies, providing evidence of how this approach is suitable for an everchanging environment which includes the built, natural, and human fabric of our surroundings.



Figure 1, Cliff Dwellings of the Dogon Tribe (Sudan), from Architecture Without Architects, 1964. [photograph]

Existing Definitions

The definition of ‘vernacular architecture’ is fickle and often varied between the scholars in the field, however it is mutually agreed that the vernacular relates to regionally specific buildings which carry local tradition and dialect. The field has been a point of interest for some 200 years and many have analysed the topic extensively, yet its global span and specificity dependant on region and time deem it problematic to classify and even more so, make relevant in a present/future context. Amongst its many definitions, it is mutually agreed amongst most that vernacular is comprised of buildings which are built using locally available materials and using skills of the local community, generally traditional skills passed down through generations. This implies, and is broadly agreed upon, that vernacular buildings are constructed by the people in need of them, as opposed to professionals or architects. Oliver states in his 2006 book “Built to Meet Needs: Cultural Issues in Vernacular Architecture”, that he defines vernacular architecture as “all the types of building made by people in tribal, folk, peasant and popular societies where an architect, or specialist designer, is not employed.” (Oliver 2006). Perhaps the first to draw attention to the subject is Bernard Rudofsky with his exhibit at the Museum of Modern Art NYC (MoMA) in 1964 titled “Architecture without Architects”. The exhibit, as well as its coinciding catalogue published the following year, consisted of hundreds of photographs of primitive and indigenous settlements across the world, drawing attention to the artistic, functional, and cultural richness of vernacular architecture. The title itself implies Rudofsky’s definition of the subject matter; architecture built by the Other. Many scholars invested in this field since, including Marcel Vellinga and Paul Oliver, agree upon this aspect.

This definition poses this field as a juxtaposition as Architecture (with a capital A) implies a process of designing every minute detail using skills learnt academically, whereas the vernacular implies hand crafted buildings without professional guidance. However, the name itself, “vernacular architecture”, translates from Latin into ‘native science of a building’ (Oliver 2006) which is appropriate yet vague. The definition is also a very

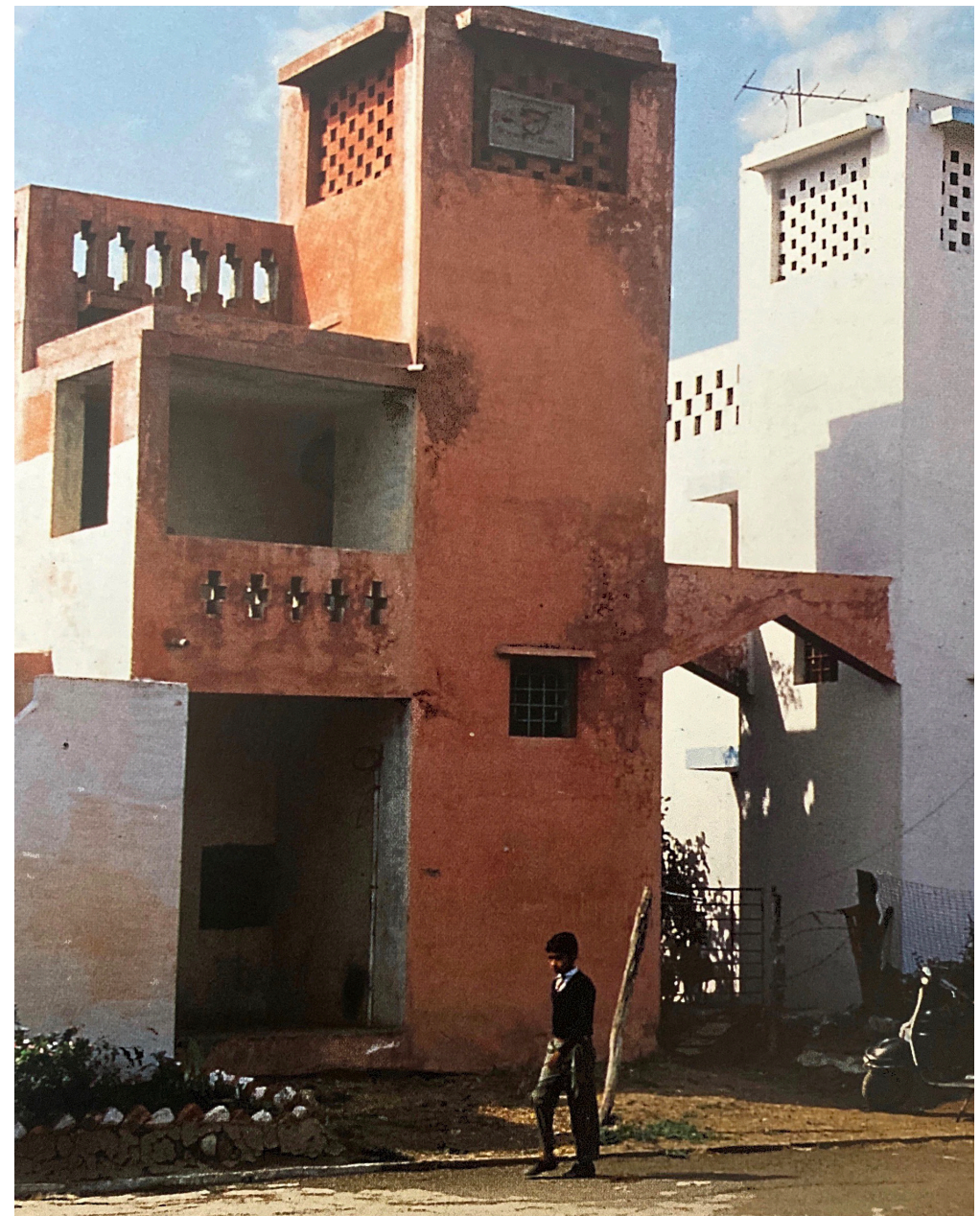


Figure 2, Oliver, 1995. Balkrishna Doshi's Aranya, vernacular low-cost housing scheme in Indore, India. [Photograph]

general term leaving it little value in identifying buildings, therefore examples are preferred over definitions when describing vernacular architecture. The inaccurate definition leaves the vernacular open to interpretation, further constituting its seen lack of value in being useful as a contemporary resource.

Agreed Aspects

A common attitude towards classifying and defining vernacular architecture has until recently been its sole position within historical study as opposed to future application. As portrayed in “Architecture without Architects”, Rudofsky brings vernacular buildings to the focus of the reader as artefacts and objects of the past, with no implication of how we might draw from them a contemporary usage. Partially due to this exhibit, there is a preconception to vernacular architecture as consisting only of highly primitive buildings, typically round earth houses and nomadic shelters. The vernacular does include these, and it is important to recognise them as historical objects in order to preserve the traditions and indigenous knowledge displayed through them. However due to this, many fail to recognise the present relevance of the buildings portrayed and how some contemporary structures can be viewed as vernacular. The buildings should be used as “indigenous knowledge” (Vellinga 2005) transferring the knowledge passed down through generations and “implementing local vernacular know-how in both a development and modern context.” (Vellinga 2005) When analysing vernacular buildings, it is possible to find contemporary examples of the vernacular which in certain regions differs to that of the past due to available resources changing. The adaptability of the vernacular process allows for this change. Examining contemporary examples celebrates the relevance of historical buildings whilst also proving their practicality, which is what this essay strives to do through the later use of case studies.

Due to the stereotype of vernacular architecture as objects of history, there is a widespread preconception that innovative methods of construction cannot fit into the same category. Many contemporary examples utilise local materials and local expertise in innovative ways, which is then classified as not vernacular. When viewing vernacular as a process, this allows for these buildings to be relevant to their own context, as the innovation comes from new knowledge which should not be disregarded in design or construction. This shift in perception gives value to the vernacular process and shows the effectiveness of its application to contemporary designs.

Process vs Artefact

Most definitions suggested by scholars imply vernacular architecture as a typology or artefact as opposed to a process. The distinction between process and artefact changes the dynamic of the subject as one implies applicability and the latter an object of the past. Although it is important to recognise the historical value of vernacular buildings, “an emphasis on such conserved buildings as historical artefacts has often been at the expense of understanding how they have been adapted over time to meet changing needs.” (Oliver 1987) Vernacular buildings are always suitable to the climate which they are set in, transfer local culture successfully, and are made of local materials. It is evident through scientific enquiry that our environment changes, therefore the climate and available resources within a certain region also change, urging the needs of inhabitants to change alongside. Vernacular architecture is the only example of a ‘typology’ which always addresses the needs of its inhabitants of that specific time. This is due to it involving the process of responding to what is relevant to its time and its place directly, as opposed to simply applying a typology or style.

However, when analysing vernacular buildings singularly you can find that because they are always so specific to the region which they originate from, it is the process of them becoming which they have in common as opposed to their physical attributes. This 'process of becoming' is therefore the key to defining vernacular architecture and so by analysing the examples we can deduce elements which amalgamate into a process. By valuing the mass of knowledge contained within vernacular architecture, we can extract a formula which vernacular builders applied in the construction of their buildings, and therefore apply this formula to the future of architecture when dealing with contemporary issues (Asquith and Vellinga 2006). Those within the field of study of architecture are commonly concerned with the design process of buildings, whereas examples of vernacular architecture show an approach primarily concerned with meeting specific needs, and the architectural solutions are arrived at over generations (Oliver 2006).

By following this method, we formulate how to build vernacular structures. This includes:

1. Local focus on materiality in terms of sourcing and processing.
2. Built by local people using local technical knowledge and skills.
3. Local focus on identity transfer, paying attention to symbolism as well as local way of life.
4. Building to meet specific needs: a form follows function approach.

The steps outlined are my personal summary and can be interrogated to form more precise instructions however for the purpose of this essay I will keep them general.



Figure 3, Author's Photograph 2021. Vernacular Roof Repair in Helford, Cornwall. [Photograph]

Contemporary issues in a changing society

There is a direct relationship between the built environment, natural environment and the people who inhabit (or occupy) space. As all three components are drastically changing continuously, we are constantly faced with the challenge of adapting the built environment to accommodate for this change. Vernacular architecture is evolving and region specific, complying to the environmental and cultural needs of its time, therefore posing a solution to the ever-changing concerns of our society. We are currently living in the age of transition, with drastic changes to our climate causing natural disaster, a shift to digital resources causing advances in technology, and rapid urbanisation with a predicted world population to reach 9 billion by 2050 (Databank 2020). These factors solicit a response from the design industry to house the increasing population whilst using regenerative solutions. This increase in population is accompanied by frequent natural disaster, physical and political warfare and rise in digital technology meaning our solution to these issues when designing the built environment must be flexible to individual situations.

The aftermath of historical influences on architecture, including environmental, social and economic factors, such as colonisation or natural disaster, have also contributed to the globalisation seen in contemporary architecture. Particularly in the global south, it is evident many post-colonial countries have lost touch with their vernacular architecture during times of occupation and have since become gradually more Westernised. It is crucial, now with the global accessibility more than ever, to restore regional identity and local vernacular to these regions in the process of addressing the rising housing demands.

It is palpable that in light of the changing factors of the environment it is difficult to draw attention to vernacular forms from a period of the past which is why it is crucial to understand the process of what makes the vernacular as opposed to drawing direct inspiration from them as a typology. From there, functional vernacular aspects such as cooling systems,



Figure 4, Akram Shahid, 2022. Residents use a raft to move along a waterlogged street in a residential area after a heavy monsoon rainfall in Hyderabad City, Pakistan. [Photograph]

solar orientation or material processes can be drawn and reiterated in synthesis with modernity to produce contemporary vernacular solutions as shown through the case studies in the closing chapter of this essay.

Consequences of Modern Design

The general approach to tackling contemporary issues has been a search for innovative, modern approaches. The study of architecture has rarely turned towards the past when in search for answers, and instead the industry adopted an ocularcentric attitude towards design. It can be seen that 19th and 20th architecture did attempt to counter this by drawing upon the vernacular principle of functionality and intuitiveness leading a design, resulting in the famous “form follows function” coined by Louis Sullivan. This phrase however does not address the cultural identity or local materiality which vernacular buildings possess. Following this phrase which focused on efficiency, the International Style emerged in the 1920s which, as its name ironically suggests, held no value in regional identity and instead created a typology which was repeated in cities across the globe. The common approach led to many architects designing large glass volumes, as seen in the example by Mies Van Der Rohe in Figure 5. The sole premise of efficiency in design, was dismissive of the importance of cultural identity and utilising local resources, resulting in a built environment which is unsustainable and culturally inappropriate. Modernism and Post-Modernism were both attempts to counter this, however both focussed yet again on innovative approaches as opposed to drawing up on the already existing traditions and contexts or the regions which they were based in.

Kenneth Frampton’s 1983 publication titled “Towards A Critical Regionalism: Six Points for an Architecture of Resistance” is situated within a relevant point of view. Through this publication, Frampton aimed to “enable an architecture of resistance” (Szacka and Patteeuw 2019) by understanding architecture beyond aesthetic universalisation imposed by Modernist and Post-Modernist architecture of his time. This aim was primarily addressed through Frampton’s advocacy for the sensitivity of

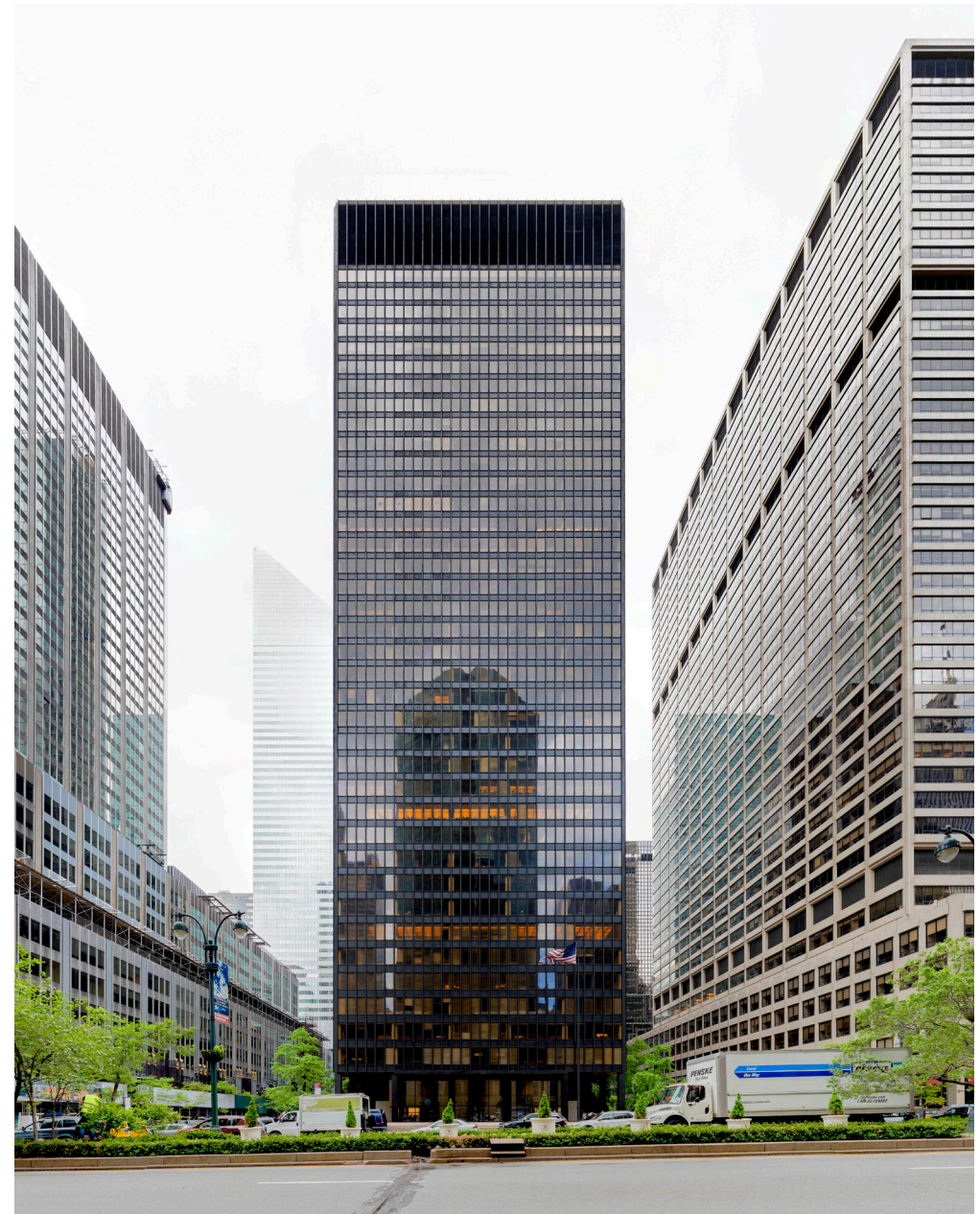


Figure 5, Ohyama, 2017. Seagram Building by Mies Van Der Rohe, as viewed from across Park Avenue. [Photograph]

a site, including its topographical and technical constraints, as well as cultural and material histories. Architecture of the 20th century was driven largely by the “quest for newness and invention” which commodified architecture into a “global consumer product” (Szacka and Patteeuw 2019). Although this publication was all too soon understood as a historical document on peripheral conditions, its relevance to the contemporary discourse into vernacular architecture is evident. Frampton’s call for an architecture which is sensitive to its site and counteracts the industry lean into homogenization and capitalism is answered through vernacular architecture and the vernacular process being reintroduced.

Local Identity and Cross-Cultural Transfer

“Nothing more clearly reflects the status and the tendencies of a people than the character of its building.” - Louis Sullivan

As a response to the many critical conditions of contemporary society, the field of architecture is attempting at presenting solutions through sustainable and regenerative building techniques. Although this growing interest in economically, socially, and environmentally conscious buildings is undoubtedly positive, there have been many solutions to this topic which fail to address the importance of local identity and the transfer of cultural aspects. The ethnographic enquiry into the people who inhabit or occupy buildings is key in understanding the cultural transaction which takes place when considering the future of the built environment. The importance of identity is omnipresent across the field of architecture through its direct relationship with anthropology. The building becomes ‘architecture’ (Hills 1998), or a ‘dwelling’ (Oliver 2007), only when inhabited by a user. Vernacular architecture transmits the dialect between user and dwelling by solidifying the identity of the user or group of users. Heidegger points out in “Building Dwelling Thinking” published in 1954, that it is a common denominator amongst many forms of modern architecture that aesthetic qualities are prioritised over the people who make and inhabit places for themselves (Sharr 2010). The discourse into the importance of user in a given space is also understood philosophically and phenomenologically. The fact that so many disciplines give value to the role of the user in portraying identity is evidence alone that there must be truth to this. Bourdieu writes about the social cohesion between inhabitants, and how this provides a framework for a housing model to complement and sustain the meanings and structures of this society (Webster 2010).

The urban historian Erwin Anton Gutkind was potentially the first to be concerned with exploring how “the building of houses in primitive and past societies is an integral part of the social and spiritual life of the people of the group” (Gutkind, 1953). Gutkind’s discourse sits within a broader conversation on the topic of decentralising cities as a response to the degenerated relationship between individuals and their communities as well as man and nature. Although his research refers directly to urban development, it channels the relevant aspects of the study into vernacular architecture. The 1953 series “How Other Peoples Dwell and Build”, similarly to “Architecture without Architects” documents a range of vernacular structures across the globe, accompanied by drawings and photographs. Gutkind particularly analyses the relationship between the inhabitants of the buildings with their architecture, presenting the belief that “the relationships among architecture, environment, and community were more harmonious in traditional, non-Western places than in the modern world.” (Vellinga, 2019) This gives significance to how vernacular buildings maintain the relationship between the buildings and the people living “in, or at, or on, or about a place” (Oliver 2003). It can be interpreted as a “romantic interest in traditional buildings which is antiquarian, and sometimes,

purely nostalgic” (Oliver 2006) however the pragmatic sensibility of the level of cultural identity and celebration shown through vernacular buildings is decisively higher than that of contemporary building types which are repetitive globally and unrelated to their context. The consideration of cross-cultural transfer is essential in maintaining regional identity across the globe. While many ‘sustainable’ solutions to the current state of the world have been proposed by architects as well as other relevant fields, if these do not consider local identity, they risk both rejection by inhabitants and contribution to global-blandness. Many organizations are working on providing shelter which is environmentally conscious and affordable however despite their good intentions, by neglecting the importance of identity within communities, their projects are often rejected (Cole and Lorch 2003). Needless to say, this delinquency causes greater negative impact on the environment as well as wasting time and resources whilst unsuccessfully providing shelter for those in need. Vernacular architecture contains culturally specific aspects which consider the importance of identity, both in the personal and regional realms. The construction itself is carried out by local builders, whose skills are a result of generations of local knowledge being passed on. The materiality too is local, meaning it reflects the geographical identity of the region. Combined with skills, this creates a unique and authentic portrayal of the identity of the community. This combination ensures identity is portrayed as even regions which have access to similar materials, have different wisdom in how to use them, different traditions of ornamentation and different lifestyles.



Figure 7, Kéré Architects, 2008. Community members flattening the floor during the construction of the Gando Primary School Extension.
[Photograph]

The applicability of the vernacular process is gradually becoming more common in the 21st century. Architects such as Anupama Kundoo, Joe Addo and Diébédo Francis Kéré amongst many others pose examples of how they have followed the local-orientated formula of design to achieve climatically and socially appropriate buildings which meet their needs. It can be argued that the following case studies fall into the “neo-vernacular” bracket, drawing inspiration from vernacular structures and emulating their native sensibility through careful consideration of qualities of space, form and materiality. However, through careful analysis of their contexts I defend their position in the category of vernacular by following the definition of the vernacular as being a process, therefore using them as examples of contemporary vernacular buildings.

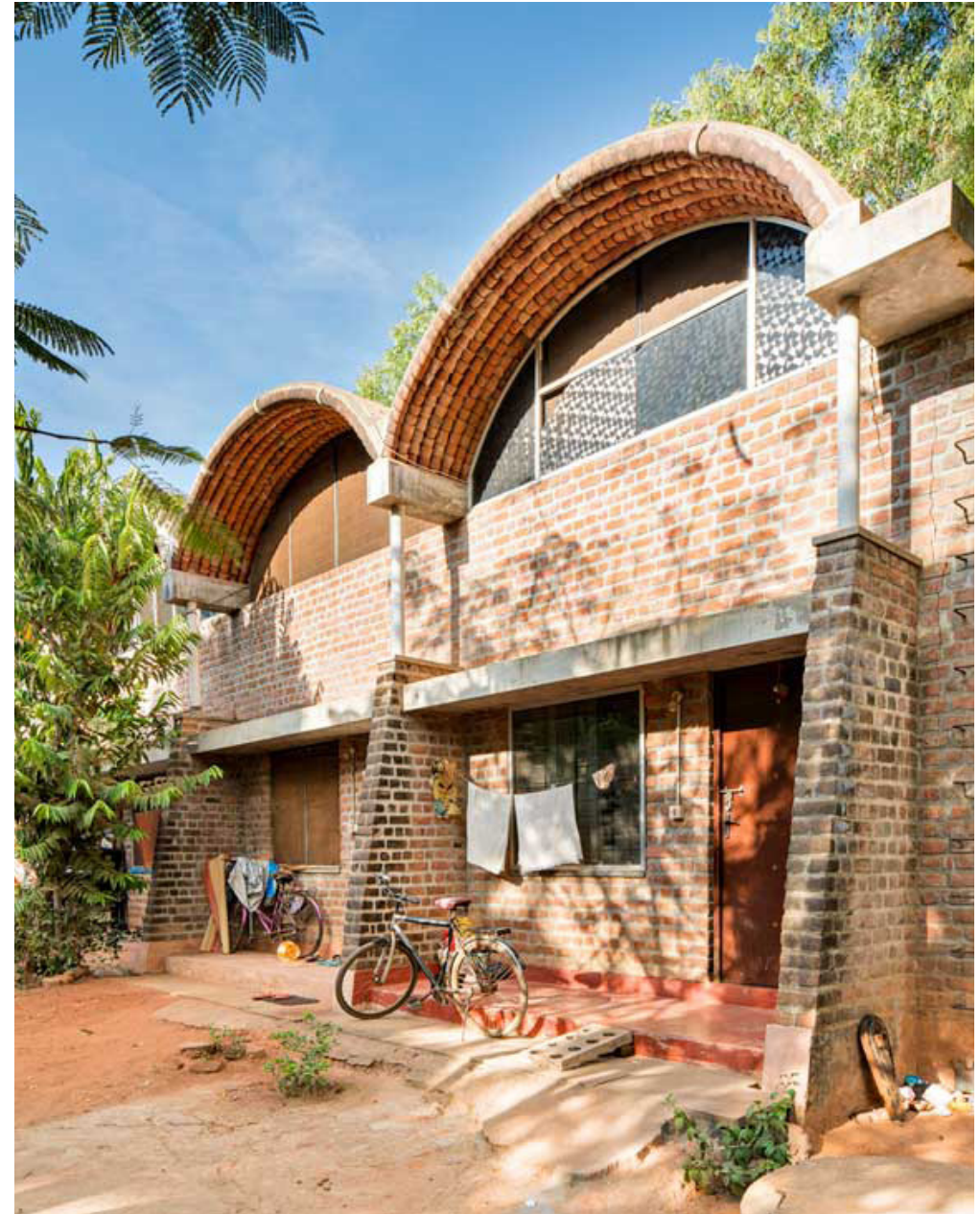


Figure 6, Anupama Kundoo, 2003. Sangamam low-cost community housing scheme using vernacular process. [Photograph]

Anupama Kundoo - Wall House

Wall House is an experimental home by Anupama Kundoo in Auroville, India completed in 2000. As an architect, Kundoo has advocated for the return of the vernacular to the architectural language of India after witnessing the complications of using Western methods of building to counter the urbanisation in Mumbai (Bombay). The home has gained international fame and attention for its unique use of traditional methods of craft to celebrate the skills of the craftsmen in the local region as well as serving as a prototype for future construction. The recognition arrived primarily from the house being built of 'unusual' materials such as stacked terracotta pots which form the high vaulted ceiling of the open plan interior. In the process of designing and building her home, Kundoo utilised the materials sourced as close to the site as possible showing vernacular attitude through local-orientated focus. The house was also built by local craftsmen, whose skills were gradually disregarded across India due to Westernisation despite being passed down through generations. Many researchers and scholars would not place Kundoo's home in the 'vernacular' category due to the innovative methods used in the construction. It is this attitude of vernacular being based purely off objects of the past that is stopping it from being used as a resource in the present day. When analysing the process which constitutes a vernacular building or structure, it is agreed that they are made of materials found locally and by the local people using traditional processes, which is exactly the process undertaken with Wall House.

The materiality includes reworked pieces of craft made by locals as well as clay brick, available widely in India post-monsoon season. This materiality is vernacular to the site and cultural context, as the objects of craft are made by the people through traditional skills and repurposing them in construction of a house is simultaneously innovative and vernacular. By reinventing their purpose, as opposed to introducing foreign materials, Kundoo embraces the vernacular of the region. The handmade-brick building technique is an age-old approach in India, however since gaining

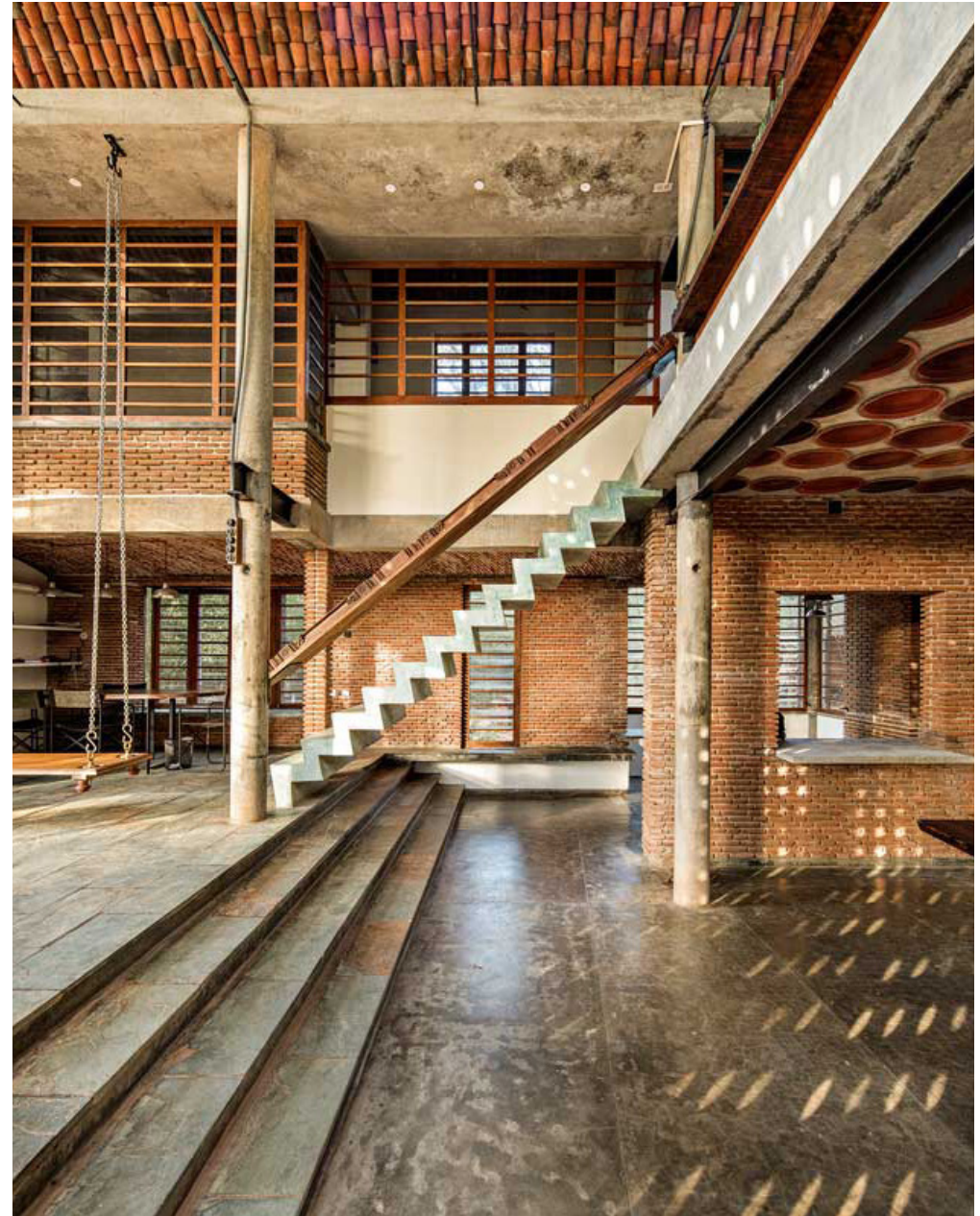


Figure 8, Anupama Kundoo, 2000. Wall House interior living space. [Photograph]

independence in 1947, the country has continued to utilise British method of building due to the descend caused upon their building customs. “I remember we were taught about industrial brick as if history began then. Everything that existed before was never addressed in our studies” (Kundoo, Home, 2020). The colonisation led to many aspects of Indian culture being suppressed which has caused recent generations to address the issues of the built environment in a Western way with little to no knowledge of their vernacular.

The modern nature of the house is evident at first glance, however when analysing the features, the aspects of traditional vernacular are visible. An example can be seen through the vaulted ceiling, “In olden days we had very high ceilings. We had the ceilings so high up that the hot air would collect up there.” (Kundoo, Home, 2020) The soaring ceilings are a vernacular cooling method employed in Indian architecture but commonly replaced with air conditioning systems in Westernised homes. Kundoo utilises the vernacular cooling system by using a material found locally: the handcrafted terracotta pot. This innovative way remains vernacular as it follows the formula of what makes a vernacular building. Responding to her needs as an inhabitant, Kundoo turned her attention to what materials were available locally and how to use them by incorporating local know-how. The home was famously completed through constant correspondence between Kundoo and the craftsmen of the local area whose expertise was extremely valued.



Figure 9, Anupama Kundoo, 2000. Wall House vaulted ceiling made of stacked terracotta pots. [Photograph]

Another clear illustration of the vernacular is the plan and layout of Wall House; the main space is an open plan living area, featuring structural pillars, which opens out into a courtyard space. These aspects are seen across India in traditional dwellings and temples. Kundoo implements this aspect into the landscaping of her home however the formal arrangement features an L shaped building as opposed to the traditional house which encloses the entire courtyard from all four sides. Approaching the courtyard differently proves only that Kundoo considered what was vernacular to her exact site and time, as opposed to replicating the traditional method exactly which would be in fact be the opposite of vernacular if it meant not considering the direct context around her site. The pivoting screen wall which opens out into the courtyard is clearly derived from jaalis; semi-transparent partition walls featuring patterns which allow light and airflow through Indian buildings including homes, temples and other monuments. These were traditionally hand crafted by skilled artists of the era, much like the screen in Wall House. The wall provides light as well as shade whilst contributing to the passive ventilation of the building.



Figure 10, Betten, 1999. Jaali in the Nachna-Parvati Temple. [photograph]



Figure 11, Anupama Kundoo, 2000. Pivoting Screen Wall example of vernacular Jaali. [Photograph]

Joe Addo - Inno-native House

Joe Addo is a Ghanaian architect who after several years of working in LA, returned to his home country in 2004 and built his home, the Inno-Native House, in the capital Accra. Addo's home, like Kundoo's, has gained much recognition worldwide for its auspicious manner of integrating vernacular building techniques into a modern home. The house utilises passive cooling methods and locally sourced materials which, similarly to the case in India, have been largely disregarded due to Westernisation. Adobe brick forms the main component of the Inno-Native House walls; a process and material vernacular to Ghana but used little since the British occupation (1821-1957). Even in post-colonial Ghana, it is clear that the building industry remains Westernised through its heavy reliance on concrete due to the trade of Portland cement. Addo addresses the need to return to vernacular methods through his involvement in the innovation of Pozzo-Ghana, a cement additive manufactured in Ghana priced affordably for the country's residents (Gerfen 2007).

The building is ventilated passively, by using "walls that breathe" (Addo, Home, 2022) which are semi opaque and utilise mosquito nets as opposed to solid barriers, and clay bricks which cool the house through their water content. The house is also elevated, allowing cool air to pass beneath the floorboards. The return of this passive cooling method was doubted by many of the locals during the construction of the home, however Addo succeeded in providing a cool and comfortable living environment for his family.



Figure 12, Joe Addo, 2004. Jamestown House, Balcony View. [Photograph]

Addo has coined the term “Inno-Native” as an undercurrent for his practise which summarises the ethical intention behind his approach. “The innovation is the knowing how to use these materials, and the native is sourcing the thing locally” (Addo, Home, 2022). This term mirrors the underlying and key aspects of what makes a building vernacular, by sourcing things locally but using the skills of the community. When designing and constructing the Inno-Native House, Addo looked towards traditional Ghanaian materiality, noting that “...building practises have been based on climate conditions. Wood, timber, bamboo, woven elements.” (Addo, Home, 2022). The materials which he found were then processed only by local people. By travelling around his region, Addo tested different craftsmen’s methods of making adobe brick before choosing the right one, however he remained within his local region. The layout and form of the house too were drawn from the vernacular process of building. As Addo points out “The aesthetic of this house is born out of the functionality of all elements.” (Addo, Home, 2022) This echoes Oliver’s definition of vernacular as “built to meet specific needs” (Oliver 2006) and shows how Addo’s attitude towards the home was considerate of the needs of his family and functionality of the building contrary to the aesthetic driven approaches of the West.



Figure 13, Joe Addo, 2004. Jamestown House, Interior View. [Photograph]

Diébédo Francis Kéré - Burkina Faso Primary School

Diébédo Francis Kéré of Berlin Based Kéré Architects has been in the spotlight of the architecture industry since winning the Aga Khan Award of Architecture in 2004 for his community driven focus. After completing his architectural studies in Berlin, the architect's first project provided a primary school in his home village in Burkina Faso. Kéré focussed primarily on the thermal and ventilation strategy while working with limited resources and the skillset of the local people. Transferring the European model which Kéré learnt through his studies in Germany was not an option due to the limited resources and different climate in Burkina Faso. The local community function very differently to the communities in Europe, living in a way much more connected to the natural environment meaning a European model, although modern and efficient, would risk rejection.

However, the project has been remarkably successful amongst the local community with recent development of an extension, teacher accommodation and a community library beside the existing primary school building. The local people are proud, and the building's ventilation strategy provides a comfortable learning environment for the children. Kéré adopted a passive cooling approach, vernacularly used in Burkina Faso. The plan provides three classrooms, with shaded break spaces between them. The elevated roof allows air flow to pass through, and the roof overhang allows shading to keep the thermal mass of the clay walls cooler than the outside temperature. The utilisation of the passive cooling method made the building appropriate to the needs of the users whilst remaining affordable and easy to build. Vernacular ventilation and thermal strategies are by definition responsive to the climatic conditions of the site which they are set in, meaning there is always a way to avoid mechanical air conditioning systems, reducing the impact on the environment, and reducing the cost of construction and maintenance of a building.



Figure 14, Kéré Architects, 2001. Gando Primary School, external view showing outdoor shaded spaces between classrooms. [Photograph by Simon Duchoud]

The school is built from adobe brick, a technology more advanced than the traditional mud bricks of Burkina Faso. Although this process is innovative, the material itself remains vernacular and by introducing this new process, Kéré is complementing and utilising the vernacular process of using earth bricks but making the process relevant to its time, uniting tradition and modernity. Burkina Faso is one of the poorest countries in the world, ranking 184th out of 191 countries in the latest report of the United Nations Development Program (Databank 2022). The prominent level of illiteracy across the country makes it more difficult to explain modern technologies within architecture and engineering, making the adobe brick seem more innovative than it is. Kéré's choice of using the naturally local materiality as opposed to introducing European building materials has meant he has taken this opportunity of teaching the locals to reintroduce vernacular knowledge.

The introducing of this technology has deemed Kéré's work to be classified as innovative and humanitarian, but explicitly not vernacular to many in the field of architecture. This is said because "the intention is not to continue or to re-establish existing traditions, but rather to build on existing knowledge and to guide it in a direction that will make development possible in the first place" (Lepik 2017). The misconception of vernacular not incorporating innovation is again, the reason why it remains viewed as an object of the past. Kéré's approach directly involves the community into an age-old process of building with earth bricks which is vernacular to their region; it has simply been disregarded for a long time due to poverty and lack of education. Using the definition of vernacular as being a process as opposed to an object of the past, we can see how Kéré's ethics and work follow the formula to local-orientated design and how the community takes pride in their achievements through this.



Figure 15, Kéré Architects, 2001. Students sitting in the shade of Gando Primary School. [Photograph]

“Architecture should speak of its time and place, but yearn for its timelessness.” – Frank Gehry

For the last 200 years, the field of architecture has been striving for innovation and the avant-garde in the search for steadily ‘better’ architectural solutions. Although there is value in this intention, the field has undoubtedly leant towards the future much more than the past, consequently overlooking the knowledge of our predecessors and the value of their process in designing the built environment. By redefining how we perceive vernacular architecture, we can see the clear process which the builder-inhabitants employed to design and build accordingly to their social and environmental context. This shift in our perception of ‘vernacular architecture’ allows us to see the process as relevant and functional in the design of the future built fabric of our society, as opposed to a purely historical aspect of the field.

In light of the current global issues, turning towards the vernacular process becomes a solution to the issues of contemporary design through a careful response to the context of each individual project. In the age of information, it is easy for the architectural industry to transfer knowledge or building models across the globe, however as the modernist and post-modernist movements have shown, this leads to global-blanding and the descent of regional culture and identity resulting in rejected and unsuccessful architecture with a negative impact on the state of the natural world.

The process used to arrive at a piece of vernacular architecture is one local-orientated, focusing on local materials, processes and identity of place and people. The architecture is embraced by the people and in no way excessive as it is built to meet the needs of the user, complying with the anthropological demands. Whether it be a dwelling, an educational building or a place of worship, the process is applicable to all building types and all sites. Many contemporary architects, including Anupama Kundoo, Joe Addo and Diébédo Francis-Kéré are employing this local-orientated focus and proving how this can and should be the prototype for future architecture. By maintaining traditional aspects of construction, they approach their projects with a respect for the local culture and deliver architecture reflective of its time and place.

The situation of the world in the present day is more complex than ever, and our architecture is reflective of our culture and history. The change in perception of vernacular buildings is a simple one, yet as seen in the work of Kundoo, Addo and Kéré, this respect of time, people and place can pose a solution for the future of architecture by uniting tradition with modernity.

- Figure 1, Cliff Dwellings of the Dogon Tribe (Sudan) [Photograph]. From Architecture Without Architects. Available at: <https://www.moma.org/calendar/exhibitions/3459> [accessed 8 Feb 2023].
- Figure 2, OLIVER, Paul. 1995. Balkrishma Doshi's Aranya Low Cost Housing Scheme in Indore, India. [Photograph]. From Dwellings: The Vernacular House Worldwide p13.
- Figure 3, BRZOZOWSKA, Weronika. 2022. Vernacular Roof Repair in Helford, Cornwall. [Photograph]. Author's Photograph.
- Figure 4, SHAHID, Akram. 2022. Residents Use a Raft to Move along a Waterlogged Street in a Residential Area after a Heavy Monsoon Rainfall in Hyderabad City, Pakistan. [Photograph]. From Getty Images. Available at: https://www.gettyimages.co.uk/detail/news-photo/residents-use-a-raft-to-move-along-a-waterlogged-street-in-news-photo/1242590163?utm_medium=organic&utm_source=google&utm_campaign=iptcurl [accessed 8 Feb 2023].
- Figure 5, OHYAMA, Ken. 2017. Seagram Building by Mies van Der Rohe, as Viewed from across Park Avenue. [Photograph]. From Wikipedia. Available at: [https://en.wikipedia.org/wiki/Seagram_Building#/media/File:Seagram_Building_\(35098307116\).jpg](https://en.wikipedia.org/wiki/Seagram_Building#/media/File:Seagram_Building_(35098307116).jpg) [accessed 8 Feb 2023].
- Figure 6, KÉRÉ ARCHITECTS, Kéré Architects. 2008. Community Members Flattening the Floor during the Construction of the Gando Primary School Extension. [Photograph]. From Kéré Architects. Available at: <https://www.kerearchitecture.com/work/building/gando-primary-school-extension> [accessed 8 Feb 2023].
- Figure 7, KUNDOO, Anupama. 2003. Sangamam [Photograph by Javier Callejas]. From Anupama Kundoo. Available at: <https://anupamakundoo.com/portfolio-item/sangamam/> [accessed 8 Feb 2023].
- Figure 8, KUNDOO, Anupama. 2000b. Wall House Interior Living Space. [Photograph by Javier Callejas]. From Anupama Kundoo. Available at: <https://anupamakundoo.com/portfolio-item/wall-house/> [accessed 8 Feb 2023].
- Figure 9, KUNDOO, Anupama. 2000a. Wall House Vaulted Ceiling Made of Stacked Terracotta Pots [Photograph by Javier Callejas]. From Anupama Kundoo. Available at: <https://anupamakundoo.com/portfolio-item/wall-house/> [accessed 8 Feb 2023].
- Figure 10, KUNDOO, Anupama. 2000c. Wall House Pivoting Screen Wall Showing Vernacular Jaali. [Photograph by Javier Callejas]. From Anupama Kundoo. Available at: <https://anupamakundoo.com/portfolio-item/wall-house/> [accessed 8 Feb 2023].
- Figure 11, BETTEN, Arnold. 1999. Jaali in the Nachna-Parvati Temple. [Photograph]. From Wikipedia. Available at: https://en.wikipedia.org/wiki/File:Nachna_Parvati-Tempel_Jali_1999.JPG [accessed 8 Feb 2023].
- Figure 12, ADDO, Joe. 2004. Jamestown House, Balcony View [Photograph]. From ArchiDATUM. Available at: <https://www.archidatum.com/projects/innonative-house-joe-osae-addo/> [accessed 8 Feb 2023].
- Figure 13, ADDO, Joe. 2004. Inno-native House, Interior View [Photograph]. From ArchiDATUM. Available at: <https://www.archidatum.com/projects/innonative-house-joe-osae-addo/> [accessed 8 Feb 2023].
- Figure 14, KÉRÉ ARCHITECTS. 2001. Gando Primary School [Photograph by Simon Duchoud]. From Kéré Architects. Available at: <https://www.kerearchitecture.com/work/building/gando-primary-school-3> [accessed 8 Feb 2023].
- Figure 15, KÉRÉ ARCHITECTS. 2010. Community Members Transporting Clay Pots to Be Used in the Roof Construction of the Gando School Library. [Photograph] From Kéré Architects. Available at: <https://www.kerearchitecture.com/work/building/gando-primary-school-library> [accessed 8 Feb 2023].

- ANDERTON, Francis. 2016. 'Innonative House / Joe Osae Addo |'. www.archidatum.com [online]. Available at: <https://www.archidatum.com/projects/innonative-house-joe-osae-addo/> [accessed 28 Nov 2022].
- ANDRES, Lepik. 2017. 'Retrospective: The Way by Kéré'. *Architectural Review* [online]. Available at: <https://www.architectural-review.com/archive/retrospective-the-way-by-kere>.
- ASQUITH, Lindsay and Marcel VELLINGA. 2006. *Vernacular Architecture in the 21st Century*. London: Taylor & Francis.
- BUCHLI, Victor. 2015. *An Anthropology of Architecture*. London Etc.: Bloomsbury Academic.
- DATABANK. 2022. 'Overview'. World Bank [online]. Available at: <https://www.worldbank.org/en/country/burkinafaso/overview>.
- DATABANK, World. 2022. 'Population Estimates and Projections | DataBank'. databank.worldbank.org [online]. Available at: <https://databank.worldbank.org/source/population-estimates-and-projections>.
- EDWARDS, Sarah. 2011. 'Vernacular Architecture and the 21st Century'. *ArchDaily* [online]. Available at: <https://www.archdaily.com/155224/vernacular-architecture-and-the-21st-century>.
- EVANS, Essienyi. 2012. 'Traditional Building Methods in Southern Ghana'. *Affordable Housing Institute - Global Blog* [online]. Available at: <https://ahiglobal.wordpress.com/2012/03/14/traditional-building-methods-in-southern-ghana/> [accessed 28 Nov 2022].
- FORUZANMEHR, Ahmadreza and Marcel VELLINGA. 2011. 'Vernacular Architecture: Questions of Comfort and Practicability'. *Building Research & Information* 39(3), 274–85.
- 'Francis Kéré: Uniting Tradition and Modernity'. 2013. www.wipo.int [online]. Available at: https://www.wipo.int/wipo_magazine/en/2013/06/article_0002.html.
- GERFEN, Katie. 2007. 'Stretching the Pour'. *Architectmagazine.com* [online]. Available at: https://www.architectmagazine.com/practice/stretching-the-pour_o [accessed 25 Nov 2022].
- GHISLENI, Camilla. 2020. 'What Is Vernacular Architecture?' *ArchDaily* [online]. Available at: <https://www.archdaily.com/951667/what-is-vernacular-architecture>.
- HILL, Jonathan. 1998. *Occupying Architecture : Between the Architect and the User*. London ; New York: Routledge.
- Home - India [Streamed]. 2020. Apple TV.
- Home, Ghana: Inno-Native House [Streamed]. 2022. Apple TV.
- LORCH, Richard and R J COLE. 2008. *Buildings, Culture and Environment*. John Wiley & Sons.
- MARY, Stephy. 2021. 'Vernacular Architecture: Ghana'. *RTF | Rethinking The Future* [online]. Available at: <https://www.re-thinkingthefuture.com/architectural-styles/a5577-vernacular-architecture-ghana/>.
- OLIVER, Paul. 1987. *Dwellings : The House across the World*. Austin: University Of Texas Press.
- OLIVER, Paul. 2006. *Built to Meet Needs : Cultural Issues in Vernacular Architecture*. Amsterdam: Elsevier.
- PALLASMAA, Juhani. 1996. *The Eyes of the Skin*. Chichester Wiley.
- RICHARDSON, Vicky. 2001. *New Vernacular Architecture*. London: King.
- RUDOLFSKY, Bernard. 1965. *Architecture without Architects : An Introduction to Non-Pedigreed Architecture*. New York: Museum Of Modern Art ; Garden City, N.Y.
- SHARR, Adam. 2010. *Heidegger for Architects*. London [Etc.] Routledge.

- SZACKA, Léa-Catherine and Véronique PATTEEUW. 2019. 'Critical Regionalism for Our Time'. *Architectural Review* [online]. Available at: <https://www.architectural-review.com/essays/critical-regionalism-for-our-time>.
- TLMAG. 2002. 'Rooted in Craftsmanship'. *Architonic* [online]. Available at: <https://www.architonic.com/en/story/tlmag-rooted-in-craftsmanship/7001872> [accessed 14 May 2021].
- VELLINGA, MARCEL. 2005. 'Anthropology and the Challenges of Sustainable Architecture'. *Anthropology Today* 21(3), 3–7.
- VELLINGA, MARCEL. 2007. 'Review Essay: Anthropology and the Materiality of Architecture'. *American Ethnologist* 34(4), 756–66.
- VELLINGA, Marcel. 2019. "How Other Peoples Dwell and Build". *Journal of the Society of Architectural Historians* 78(4), 409–21.
- VELLINGA, Marcel, Paul OLIVER and Alexander BRIDGE. 2007. *Atlas of Vernacular Architecture of the World*. Routledge.
- 'Wall House – Anupama Kundoo'. 2021. Anupama Kundoo [online]. Available at: <https://anupamakundoo.com/portfolio-item/wall-house/> [accessed 9 May 2021].
- WEBSTER, Helena. 2010. *Bourdieu for Architects*. London Routledge.