

The gabled veranda house:

The everyday dwelling of colonial Durban

by Michele Jacobs

Introduction

Over the years much has been written concerning the fate of the large colonial houses of Durban in both the local press and architectural journals. The publicity generated around these large, virtuoso houses has contributed to their restoration and a change from domestic to various commercial functions that have rescued them from demolition.

It is the small houses, many anonymously designed, what can be termed the homes of the everyday, that are more susceptible to demolition and ruin. As Oliver states: 'as a result of a lack of value placed upon small vernacular buildings of domestic use' many have been lost 'through accident, neglect, decline of traditions or deliberate

demolition.'¹ It is these houses of the everyday that are the focus of this paper in which the typical central passage plan with the 'Natal back' is explained. The characteristics and style of the front elevation of the gabled veranda house is also analysed in terms of its principal components: the veranda, the gable and fenestration.

Close scrutiny and analysis of the plans and elevations of a representative number of gabled veranda houses in the Original Drawings Collection (ODC)² of the School of Architecture at the University of KwaZulu-Natal, shed light on this popular and neglected everyday house typology of the late Victorian, Edwardian and early Union

period in Durban. It is unfortunate that many of these houses have disappeared and those that survive are often hidden behind high walls topped with razor wire or electric fencing.

Others have become isolated by the expansion of large developments such as suburban shopping centres and hospitals. These are the nucleus of the satellisation of which Baudrillard speaks,³ in which these large developments are the nucleus around which satellite businesses spring up. In the context of these remaining houses, they become the 'remnants and waste products', the detritus of the nucleus, isolated and unsuitable for domestic occupation; with the only option a change of function to adapt to this new built environment and landscape around them.

The everyday

Lefebvre says the everyday is 'the most universal and the most unique condition, the most social and the most individuated, the most obvious and the best hidden.' So he asks 'why wouldn't the concept of everydayness reveal the extraordinary in the ordinary.'⁴

Although Berke says an architecture of the everyday resists strict definition, she relates the following characteristics:

it may be generic and anonymous, unostentatious, it may be regarded as banal or common, it does not seek distinction by trying to be extraordinary, it may be quite ordinary, unselfconscious, it may be crude but also sensual, provoking sight, touch, hearing and smell and it may also be vulgar by rejecting good taste, and visceral. But more importantly architecture of the 'everyday' acknowledges domestic life, is functional: a requirement to satisfy rather than a style to emulate, and architecture of the everyday is built.⁵

The ODC reveals that these characteristics can be recognised in the small, anonymously designed and ordinary everyday houses of Durban. Furthermore, the fact that a third of the drawings in the collection were anonymously created adds credence to their value as they provide important insight into the ordinary and everyday domestic architecture of many of the European colonial settlers of the time. It could be said that the preservation of the surviving houses is important because they have 'collective and symbolic meaning' even though they may not be 'monumental'.⁶

The plan

The ODC confirms that the plan of the gabled veranda house was a variation of the four-roomed house with a central corridor with the kitchen at the back separated from a bathroom and pantry by a veranda in the form of a 'Natal back'. Several factors contributed to the incorporation of the 'Natal back' under an articulated veranda in the transition from the first wattle and daub 'Bundu style' houses to the permanent dwellings that followed.⁷

According to Norberg-Schulz 'directed plans have been legion during the course of history' where in smaller houses the direction is simply a matter of axial symmetry, whereas in the larger ones it may be marked by a passage onto which rooms are added on either side. 'The passage usually leads to a goal, be it a major room or a veranda. Often it runs across the main volume to connect its two sides.'⁸ Durban's colonial houses conformed to this concept of the directed plan form in axial asymmetry, which is evident in the central passage houses in the drawings of gabled veranda houses under discussion.

According to Radford, up until 1890 cooking took place 'in a small building set apart for this purpose'. The detached kitchen was placed at a safe distance from the house. 'It was almost always placed at the back of the main building, sufficiently far away not to be a fire hazard but not too far away to cause problems with cold food.'⁹ He describes the three primary factors that involved the separation of the kitchen from the main house. These were fire risk, the discomfort associated with cooking in hot climates, and social and racial segregation.

This was evident in the earliest 'Bundu style' dwellings and persisted until technological changes facilitated the attachment of the kitchen to the back of the permanent dwellings that followed and continued well into the 1930s. The reason for this arrangement in the 'Bundu style' dwellings in colonial Natal, and particularly in Durban, was the fire hazard of materials such as thatch on the roof, heat and odours associated with the cooking process in a sub-tropical climate, and the need for ventilation caused by the use of an open fire for cooking. Finally, and more important, there was the separation of spaces of servant and master.

Radford explains that this major change occurred probably in the early 1880s with 'the addition on to the back of the house of a small, embryonic *'Natal back'*'.¹⁰ Radford credits Kearney with this appropriate term and explains that it is 'a deep veranda flanked on one side by a kitchen and on the other a pantry and in some cases a bathroom.' Various configurations of this standard type are also confirmed in the ODC – a bedroom, a morning room or breakfast room were also included in the *'Natal back'* plan form. The *'Natal back'* pro-

vided 'a convenient set of functional and private spaces beyond the more genteel front.'¹¹



*Typical central passage plan with
'Natal back'*

According to Radford the demise of the separate kitchen toward the end of the nineteenth century, was the 'diminishment or virtual extinction of the fire hazard' through use of fire-resistant materials such as the corrugated iron roof, and replacement of the open fire with the economical kitchen range. This 'improved method of cooking together with better ventilation must have diminished the other initial reason for distance that is heat and smell.' When the kitchen, pantry and bathroom were attached to the back of the colonial house in the form of the *'Natal back'* from the 1890s on, a clear distinction between the front and back of the house was evident and 'it often retained a quasi-independence both on plan and in its structure.'¹² With the provision of water-borne sewerage, the WC was also attached to the back of

the house, albeit under a separate lean-to roof.

The ODC also confirms that the central passage running from the front door at the junction of the veranda and gable to the back veranda, usually separated the bedrooms from the parlour or drawing room and dining room. The principal bedroom would be positioned at the front to take advantage of the projecting bay window in the gable for light and ventilation.

According to Radford, these plans can be seen as independent conceptual models in the context of 'the largely unconscious, culturally-conditioned agreement among people as to what constitutes an appropriate house form.'¹³ It therefore became, over time and with strong cross influences, common knowledge that the plan should be laid out in a certain way. These plans were therefore configurations of a conceptual template. This confirms Winter's statement that the common language of construction was shared by architect, builder and craftsman and that construction became codified and so well understood that the builder did not need details from the architect.¹⁴ This colonial and culturally developed, appropriate plan form and its variations, endured well beyond the 1930s.

The front elevation

The style or character of Durban's colonial domestic architecture was determined by a number of elements that can be separately analysed, but when combined formed the unique domestic architecture of the gabled veranda house. This combination of elements resulted in the rich variety of embellishments, both decorative and functional, particularly those expressed in the front



Front elevation of a gabled veranda house

elevation, and more specifically in the veranda, the gable and fenestration in the form of windows and doors.

The veranda

Vellinga, Oliver and Bridge define the veranda as 'an open or partially walled, roofed and often slightly raised living area on the ground floor.'¹⁵ Kearney uses Ward, Lock and Co's 1888 *Dictionary of the Leading Technical and Trade Terms* definition for the veranda:

a covered way open at one side, surrounding or partly surrounding a house, generally at the level of the ground floor. The feature of the veranda is a light roof projecting and sloping from the outside wall of a house of a comparatively narrow width.¹⁶

Ornamental cottages with their picturesque rural air gained popularity with the Romantic admiration for the simplicity of country life. An integral part of the 'cottage orné' was its setting in which the veranda played an important role; linking the living rooms of the house to the garden.¹⁷ Kearney confirms this integral symbiosis between the picturesque and the veranda; that the veranda 'provided an important means of linking the house with the garden' and the form and roof of the veranda 'supplied yet another series of devices

to break up the geometry of the building and to create, deliberately, effects of irregularity and asymmetry.¹⁸ The Picturesque movement promoted, popularised and transformed the veranda, which in effect became an enlarged picture frame through which the landscape was viewed.¹⁹ It was necessary for the house to be in complete harmony with its surroundings. This could further be achieved by the shape and silhouette of the house, the use of rustic materials and verandas.²⁰

According to Vellinga, Oliver and Bridge ‘the use of the veranda clearly relates to climate.’²¹ Although unsuitable for the English climate, the veranda was, however, particularly suited to the Natal sub-tropical coastal climate and instrumental in the development of Durban’s colonial domestic architecture. In hot and humid areas it served as a dry and shaded space where breezes could be obtained, cooling the house while at the same time protecting the walls, windows and inhabitants from the heat of the sun and torrential rains. H.S. East described the veranda as ‘quite the most charming and useful feature in this climate, and a most necessary adjunct.’²² King concurs: the veranda, ‘was a sign of European “adjustment” to the climate, a feature made necessary by the social as well as spatial separation of one dwelling from another, and, as a space to spend one’s spare time, it was a symbol of economic and political status.’²³

Kearney also agrees when he states that the most obvious advantage was that the veranda afforded shelter from driving rain, thereby protecting vulnerable walls, joints, doors and windows.²⁴ Sheltering of the walls also had the advantage of thermal comfort by shielding them from direct sunlight which

without the veranda would require overnight cooling. Sun protection was another added advantage of the veranda, reducing the greenhouse effect of solar radiation through glazed areas such as windows and doors. Finally, the veranda facilitated cross ventilation when oriented on different sides of the house and in providing additional choices relative to wind speed and direction for veranda activities.

According to Norberg-Schulz the veranda along with the courtyard, passage and hall, ‘are distinct figures which transform the domestic space into a place where life may take place.’²⁵ Vellinga, Oliver and Bridge agree that ‘in social terms the veranda facilitates circulation between the outside and the inside of a building, serving communication, hospitality, and work purposes according to need.’²⁶ Kearney also confirms this notion that the veranda is the element that ‘stands between the architecture of “within” and that of “without”’ as the veranda ‘separates the building from its immediate surroundings and links the interiors through a transitional zone to the exterior.’²⁷

There were a variety of ways for the incorporation of the veranda into the elevation since ‘the veranda may be integral to a building, forming part of the construction, or it may be built in addition to it. It may be found on the back, front, or side only, or multi-sided and encircling.’²⁸ Lewcock noted that ‘the veranda provided the ideal vehicle for the ostentatious and unnecessary decoration of the Victorian era and became such an integral part of the South African scene that today it would be inconceivable for us to imagine 19th Century architecture without it.’²⁹

Kearney concurs that ‘the distribution of the veranda is characterised by an

enormous variety of form, construction, location, enclosure and size.³⁰ In its various forms, the veranda, supported on an exotic system of columns, brackets, balusters and friezes in timber or imported cast iron and finished with encaustic tiles, consistently provided the street elevation with a wide variety of complex detailing and opportunities for ornament and decoration. The veranda, therefore, was the defining element of the Durban colonial style and the ODC confirms how the veranda changed over several temporal periods and the numerous opportunities for design variety that it facilitated.

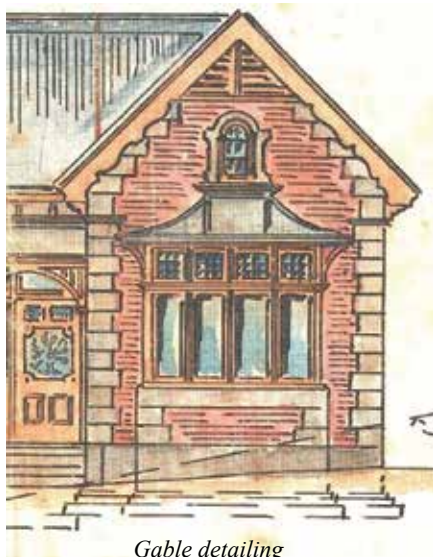
The value of the veranda, apart from a response to the weather, was a practical one in which it was used as bedrooms, offices and workshops, and often contained a corner for the larder or cold box.³¹ Everyday life activities of working, recreational reading, sewing and writing could all take place on the veranda. Seeking a deliberate irregularity in total form allowed for greater planning and geometrical freedom and this diagonal emphasis could be achieved by veranda rooms, and bay windows at the corners.³²

It was in the veranda support structures that the greatest variety of materials and change took place; imported hardwood posts with lattices or simple and continuous frieze in between being combined with cast iron elements. Varieties of timber fretwork patterns were imported from Europe and America by the end of 1900. Many cast iron types and patterns were also imported from major British manufacturers. A further evolution took place around 1910 when verandas were reduced in size, first on the southern and cooler side, then remaining only on the street elevation. During the Union period after 1910, the

lighter systems gave way to the heavier precast concrete Tuscan Doric columns, but little is known of their local manufacture.³³ These more durable columns replaced timber posts as weathering from the harsh sun and rain and destruction by termites took their toll.

The gable

Apart from the veranda, the Picturesque movement and 'cottage orné' also had a profound influence on the emergence of the front gable in the later part of the Victorian era adding variety and complexity to the street elevation. A combination of veranda and gable provided numerous possibilities 'for an architectonic interplay which enhanced the dynamic asymmetry of the villa concept.'³⁴ The verticality and projecting solid materiality of the gable provided a counterpoint to the horizontal, recessed void and lightweight materiality of the veranda. The further projecting element of the bay window formed an integral part of the gable design as part of the overall street elevation. 'This whole compositional idea could be treated within a single-storied house.'³⁵



Gable detailing

Norberg-Schulz claims that the 'gabled townhouse of Central Europe is undoubtedly one of the most characteristic and impressive manifestations of domestic architecture. Visually the gable faces the street, and the multijet-tied construction gives emphasis to the lively and strong appearance.' They are 'distinguished by variety and unity; hardly two houses are alike, and still they all belong to the same "family"'.³⁶ The same could be said for the Durban gabled veranda houses, so prolific in Durban's suburbs; their variety was diverse, hardly two were alike, but unity was established through their form and materiality. The 'width of veranda and gable could vary; two verandas at the corners could be extended to more than one view; square and polygonal bays with a variety of roof treatments, either separate or integrated, could provide additional projections and modulations'.³⁷

Their urban context, however, 'forms part of a social context and therefore has to adapt more directly to its neighbours.' According to Leon Battista Alberti, 'in Town you are obliged to moderate yourselves in several Respects according to the Privileges of your neighbour'.³⁸ These ideas and philosophies of urban social context are clearly demonstrated in the drawings and surviving houses, particularly those of Clark Road and Brand Road where the small gabled veranda houses formed streetscapes with houses in the same 'family' but where no two were identical.

The drawings of the ODC confirm Norberg-Schulz's tenet: the numerous design possibilities that heightened the irregular feeling presented by variations of window combinations within the square, round and hexagonal bay windows with flat or curved roofs. The wide variety of gable ventilators,

decorative bargeboards, half-timbering and finials, and other detailing such as corner quoining, stippled plaster, ashlar pointing and brick or stone plinths reflected on the drawings, added to the eclectic nature and materiality of the gable, which became a standard design element within the façade.

The projection of the gable and the bay window, however, created weather-proofing difficulties as they were exposed to the vagaries of Durban's sub-tropical weather conditions. Junctions between roofing finishes and parapet walls and bay window flashings to the gable walls were particularly vulnerable to the natural elements as were window frames and walls, no longer protected by verandas. Wide gable overhangs provided some protection for bay windows, but Cape Dutch Revival gables left the bay window more vulnerable to the elements.

Fenestration

If the veranda was the transitional zone between inside and outside, then fenestration in the form of doors and windows functioned as physical and psychological barriers between the interior and exterior spaces, the built space and the landscape, the natural and the man-made. Before the mechanically controlled interior environment emerged, Kearney explains that 'of all building elements, windows, doors and openings generally played a pre-eminent role as environmental filters.' Furthermore, he notes that 'expressions of inner uses, of encapsulated occupants and their particular beliefs and values may be read into the fenestration system and its decorative parts; entablatures; shutters; side-lights and curvilinear fan-lights. An entire language of entry and aperture may be discovered this way'.³⁹

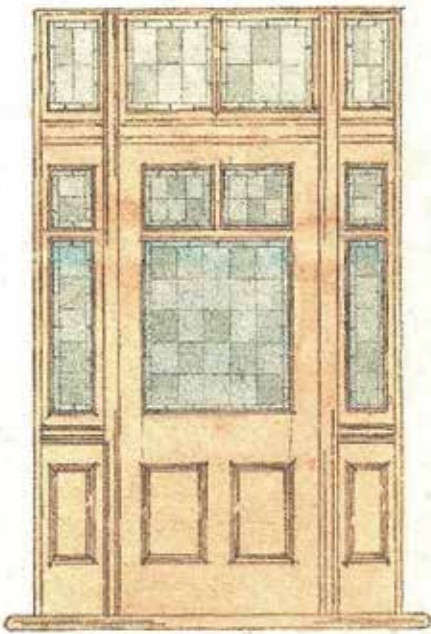
The door forms 'a linkage between the space of human beings and everything that remains outside it, it transcends the separation between the inner and the outer.' That the door can be opened, its 'closure provides the feeling of a stronger isolation against everything outside.'⁴⁰ According to Simmel, humanity sets itself boundaries, such as the door. With the freedom to remove the boundary, the door therefore provides a permanent interchange between the finite interior space and the infinite exterior space: 'life flows forth out of the door from the limitation of isolated separate existence into the limitless of all possible directions.'⁴¹ The door therefore separates the private confining interior spaces from the public exterior space of infinity. In the context of the colonial house and its relationship to the garden and the street, this is significant, particularly in the suburban context where the picturesque qualities of the

veranda facilitated this interchange between the finite interior space and infinite exterior beyond the door, veranda and boundary wall.

The significance of the door as the physical and psychological barrier between the inside and outside, the private and the public makes its positioning within the design of the façade all the more important. While French doors were the favoured option, doors varied in their design from solid raised paneled doors to those with glass panels, and with a combination of side lights and fanlights that provided numerous opportunities for design variety. Glass panels in doors did not function in the same way as in windows and were usually frosted or coloured and purely decorative while allowing light into the passage/corridor or at night to emit a glow from the interior outwards.

Fenestration in the gabled veranda house cannot be separated from the presence (or absence) of the veranda, where gradations of light, shade, glare and heat were affected by the transitional zone of the veranda. Within the asymmetrical gabled house, the door was positioned at the junction between gable and veranda. Once the timber floors were suspended and the veranda generally lifted off the ground, steps accentuated the positioning of the door and added further design possibilities. In the absence of a portico, a suitable entrance could still be achieved when the entrance was accentuated by the steps and the door framed by the veranda columns on either side.

It is clear, then, that steps, portico, veranda and door must be seen as a single entity that contributed to an appropriate entrance for even the most modest home. This system of integral parts and the numerous configurations



Typical front door

of these elements in combination with the front gable added to the variety and richness of the entrances, sheltered the door from the weather, and conveyed the social status of the owner, while contributing to an individuality of front elevation.

As Kearney states, there is a ‘deep-rooted psychological and visual need to have some form of connection with the outside world; to know “where I am” and to know what is “out there”.’⁴² Windows performed this psychological connection in the colonial dwelling. According to Norberg-Schulz the quality of light varies from place to place ‘but it is difficult to grasp its varieties before it is made manifest by means of the built form.’ He quotes Louis Kahn who said ‘the sun never knew how great it is before it struck the side of a building.’ Because architects understood this, they ‘designed windows which materialize light and thereby visualise the atmosphere of the place.’⁴³

This is particularly true of the bay window, positioned in the front elevation or side elevation gables, which provided views not just to the front but to the side as well. The transparency of the window creates the connection between the inner and the outer but ‘the one-sided direction in which this connection runs, gives the window only a part of the deeper and more fundamental significance of the door.’⁴⁴ Windows according to Kearney ‘could be looked at as deep cultural signs – indicators of the attitudes of people to their wider environment; to nature and neighbour; to privacy and health; to energy waste or eco-sensitivity; to theology and technology.’⁴⁵ In the absence of the veranda, internal furnishings such as curtains and blinds were utilised to filter heat and glare generated by the sun.

Apart from the psychological significance and benefits of the window, it also served important functional purposes. Through variations in pane and opening shape and size, the environment of the interior could be controlled. Unlike the door, Kearney explains that ‘the Regency period developed new forms of view window where one could consciously stand or sit “to take the view”, and perhaps at the same time be in a pool of light suitable for reading or sewing.’ With the advent of electric lighting this notion of the pool of light has become redundant and in the contemporary world such ‘spatial and functional zones of use have disappeared.’ Bay windows survived, however, ‘for architectonic reasons to provide asymmetrical balance to the form of the house.’⁴⁶

Conclusion

As Kearney states, ‘the long duration of this gabled veranda type and its many vernacular variations in different parts of the city and among many different peoples point to its remarkable success.’⁴⁷

The ODC and the surviving houses confirm these variations with numerous combinations of bay window, ventilators, corner quoining, finials and bargeboards within the gable and a variety of timber or cast iron veranda posts, brackets and frieze, together with an appropriate entrance at the junction of gable and veranda in the asymmetrical front elevation.

The drawings in the ODC and the surviving suburban houses of the everyday are important as they convey translocated British ideals and aspirations in the configuration of the plan and in the elevation to the street. They also reflect technologies such as the kitchen range and corrugated iron that negated the fire

risk and ventilation problems associated with cooking on an open fire, thereby allowing the kitchen to be attached to the back of the house in the form of the 'Natal back'.

The ODC also sheds light on the changing technologies that occurred with the introduction of sewerage systems that facilitated adaptations of the plan to accommodate the WC in the back of the house.

If, as Biermann suggested, architecture is the mirror of society, then the drawings and gabled veranda houses survive as an important mirror to a past society, tangible records of an architectural heritage worth preserving, if only as the last remaining vestiges of long-disappeared or no longer recognisable homes that reflect the lifestyle of a bygone era. Furthermore, he postulated, 'perhaps in no other stylistic change does one experience the truth of the dictum that architecture is the mirror

of society so keenly, as in the change from the veranda lifestyle to the burglar guard aesthetic.'⁴⁸

This is truer today than it was when he addressed the architectural students congress in 1987. Our colonial domestic architecture, representing this veranda lifestyle, is not only disappearing as a result of neglect, at times willful, vandalism and destruction, but if fortunate enough to survive many of these houses are now hidden behind massive walls topped with razor wire or electrified fencing while the verandas, French doors and sash windows are bricked up, barred, mutilated and fortified.

NOTES

- 1 Paul Oliver, *Shelter and Society* (London, Design Yearbook, 1969), p. 14; Paul Oliver (ed.), *Encyclopedia of Vernacular Architecture of the World. Vol. 1: Theories and Principles* (Cambridge, Cambridge University Press, 1997), p. 56.
- 2 University of KwaZulu-Natal, School of Built Environment and Development Studies,



438 Clark Road, Durban

- Technical Reference Library, Original Drawings Collection.
- 3 Jean Baudrillard, 'The rise of the object: the end of culture' in *Mass, Identity, Architecture: Architectural Writings of Jean Baudrillard* edited by Francesco Proto (Chichester, Wiley-Academy, 2006), p. 79.
 - 4 Henri Lefebvre (translated by Christine Levich), 'The everyday and everydayness' *Yale French Studies* 73 (1987), pp. 7–11.
 - 5 Deborah Berke, 'Thoughts on the everyday' in Deborah Berke, *Architecture of the Everyday* (New York, Princeton University Press, 1997), p. 226.
 - 6 *ibid.*
 - 7 Brian Kearney, 'Bundu style: picturesque architecture in Southern Africa' *Lantern* September 1975, pp. 10–23.
 - 8 Christian Norberg-Schulz, *The Concept of Dwelling* (New York, Electra/Rizzoli, 1985), p. 102.
 - 9 Dennis Radford, 'The detached kitchen: its occurrence in South African architecture' *Restorica* October 1984, pp. 18–27.
 - 10 Dennis Radford, 'The pioneer Natal settler house' *Natalia* 28 (1998), pp. 34–44.
 - 11 Michele Jacobs, Rodney Harber and Brian Kearney, *A Measure of the Past* (Durban, Durban Heritage Trust and the authors, 2015), p. 12.
 - 12 Radford, 'The detached kitchen'.
 - 13 Radford, 'The pioneer Natal settler house'.
 - 14 John Winter, 'Working drawings' *Architect's Journal*, 17 and 24 December 1986, pp. 37–40.
 - 15 Marcel Vellinga, Paul Oliver and Alexander Bridge, *Atlas of Vernacular Architecture of the World* (New York, Routledge, 2007), p. 90.
 - 16 Brian Kearney, 'Verandas' *Building* 18 (February 1989), pp. 9–19.
 - 17 Ronald Lewcock, *Early Nineteenth Century Architecture in South Africa* (Cape Town, Balkema, 1963), p. 121.
 - 18 Kearney, 'Verandas'.
 - 19 Philip Drew, *Veranda: Embracing Place* (Pymble, Angus and Robertson, 1992), p. 26.
 - 20 Brian Kearney, 'The veranda house' *Lantern* 33(3) March 1974, pp. 46–48.
 - 21 Vellinga, Oliver and Bridge, *Atlas of Vernacular Architecture of the World*, p. 91.
 - 22 H.S. East, 'South African planning and construction' in *Modern Buildings* (1910), p. 158.
 - 23 Anthony King, *The Bungalow: The Production of a Global Culture* (Oxford, Oxford University Press, 2nd ed., 1995), p. 265.
 - 24 Kearney, 'Verandas'.
 - 25 Norberg-Schulz, *The Concept of Dwelling*, p. 103.
 - 26 Vellinga, Oliver and Bridge, *Atlas of Vernacular Architecture of the World*, p. 91.
 - 27 Kearney, 'Verandas'.
 - 28 Vellinga, Oliver and Bridge, *Atlas of Vernacular Architecture of the World*, p. 91.
 - 29 Lewcock, *Early Nineteenth Century Architecture in South Africa*, p. 130.
 - 30 Brian Kearney, *Rewarding Conservation* (Durban, Conservation Awards Committee, 1992), p. xi.
 - 31 Kearney, 'The veranda house'.
 - 32 Kearney, *Rewarding Conservation*, p. xi.
 - 33 Brian Kearney, *A Revised Listing of the Important Places and Buildings in Durban* (Durban, City Council, 1984), pp. 17, 18.
 - 34 Kearney, 'Verandas'.
 - 35 Kearney, *A Revised Listing of the Important Places and Buildings in Durban*, p. 80.
 - 36 Norberg-Schulz, *The Concept of Dwelling*, p. 94.
 - 37 Kearney, *A Revised Listing of the Important Places and Buildings in Durban*, p. 80.
 - 38 Norberg-Schulz, *The Concept of Dwelling*, p. 96.
 - 39 Brian Kearney, 'Apertures, voids, filters: window design: a choice' *Building* August 1985, pp. 3–8.
 - 40 Georg Simmel, 'Bridge and door' in *Rethinking Architecture* edited by Neil Leach (London, Routledge, 1997), p. 67.
 - 41 Simmel, 'Bridge and door', p. 68.
 - 42 Kearney, 'Apertures, voids, filters'.
 - 43 Norberg-Schulz, *The Concept of Dwelling*, p. 89.
 - 44 Simmel, 'Bridge and door', p. 68.
 - 45 Kearney, 'Apertures, voids, filters'.
 - 46 *ibid.*
 - 47 Kearney, *A Revised Listing of the Important Places and Buildings in Durban*, p. 80.
 - 48 Barrie Biermann, 'The South African lifestyle' Unpublished notes for Symbiosis: Corobrik Third National Architectural Students' Congress, Durban, 13–17 April 1987.