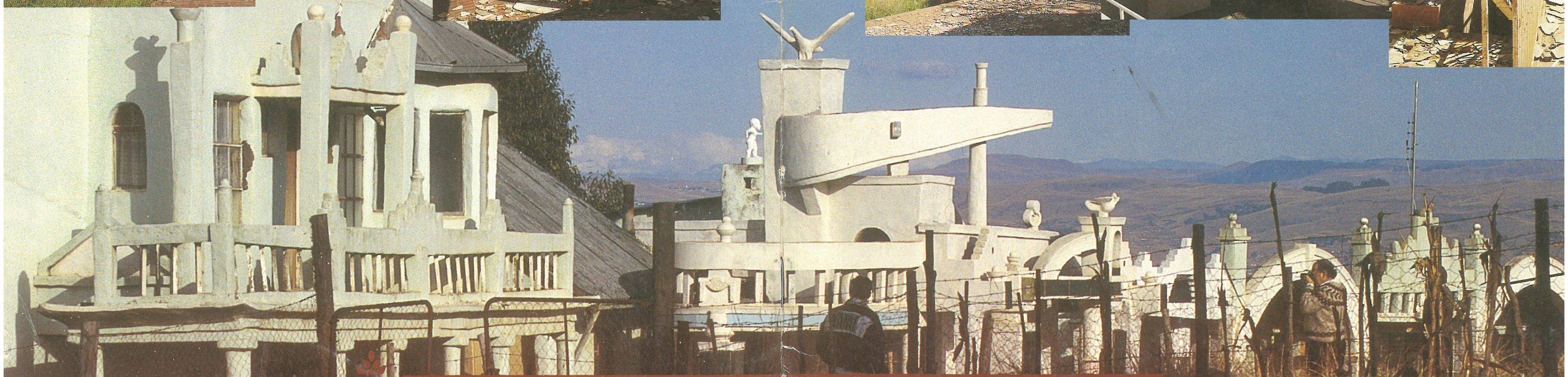
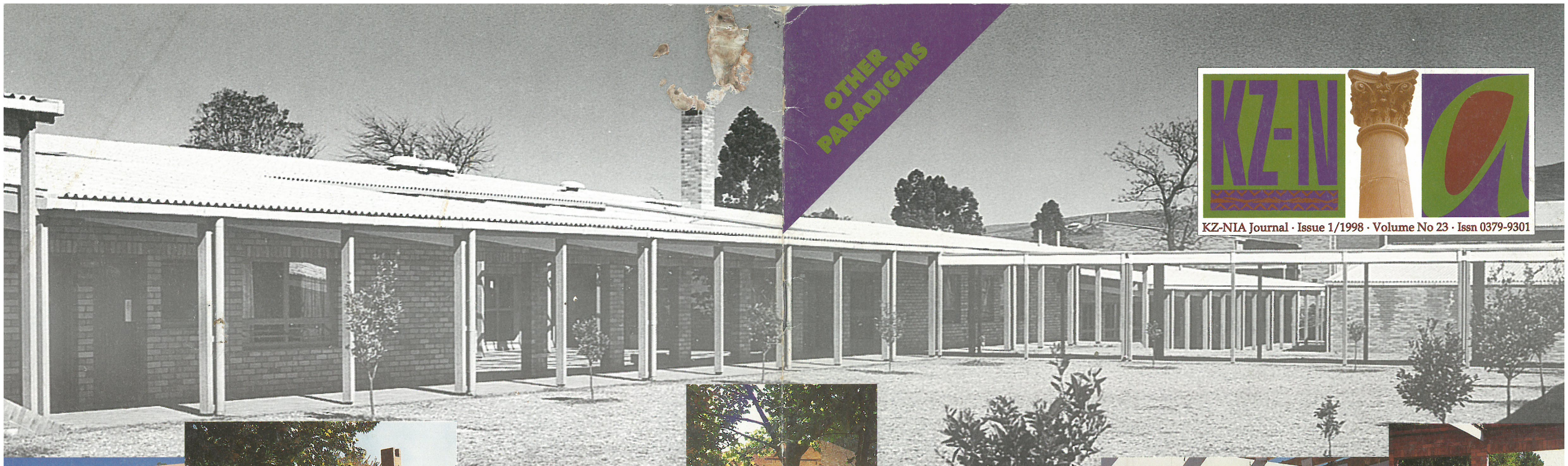


OTHER
PARADIGMS



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Institute for Architecture



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Disestablishment of the Faculty of Architecture, University of Natal

Dennis Radford, Head of the Department of Architecture was appointed Acting Dean of the Faculty on 1 April. Professor Radford is to be the last person appointed to this position, as in the restructuring of the University, the Faculty of Architecture and Allied Disciplines is to be disestablished as at the end of 1998.

The Department of Architecture will become a Programme in the School of Architecture, Planning & Housing and located in the new Faculty of Community & Development Disciplines which includes the Schools of Education, Nursing, Psychology and Social Anthropology, and of Social Work, and the Centre for Social & Development Studies.

The combined Department of Property Development (Quantity Surveying) and Construction Economics (Building Management) will form a School together with the Departments of Civil Engineering, and Surveying & Mapping and located in the Faculty of Engineering.

1998 Murray & Roberts Des Baker Competition

This year's Murray & Roberts Des Baker design competition for students of architecture is being hosted by the University of Natal. The theme is the recycling of a pre-World War II industrial building on the fringes of the CBD. Entries must be submitted by Monday, 19 October 1998.

Architectural Education

Arthur Kingsland, Senior Lecturer in Architecture at the University of Newcastle, Australia, protagonist of Problem-Based Learning and prolific writer on this educational programme, is visiting the Natal School of Architecture during May and June.

Le Sueur Scholarship

The coveted *Geoffrey le Sueur Travel Scholarship* has been awarded to Harriet Walker who graduated with Distinction in 1997 and who will be studying the vernacular architecture of India.

Constitutional Court Competition

It was announced on 8 April that *OMM Design Workshop* and *Urban Solutions*, practices from Durban and Johannesburg respectively, have won the design competition for the New Constitutional Court for South Africa to be built on Constitution Hill Precinct, Johannesburg.

This was an open, international competition which attracted 185 entries. The jury included Charles Correa, Geoffrey Bawa, and Peter Davey (Editor, *Architectural Review*).

All members of the winning architectural practices (Eric Orts-Hansen, Janina Masojada, Andrew Makin and Paul Wygers) studied Architecture at the University of Natal!
Special congratulations, Editor



Archafrica Congress

The SAIA congress which incorporates the African Union of Architects convention is being held at the International Convention Centre in Durban, 18-22 October. The theme is *Towards an Architecture of Conscience*. Speakers include Ken Yeang (Malaysia), Eric Miralles (Spain) and Mick Pearce (Zimbabwe).

Enquiries should be directed to KZ-NIA, Tel (031)21-7590; Fax 21-7586.

1998 MURRAY & ROBERTS DES BAKER COMPETITION FOR STUDENTS OF ARCHITECTURE
Recycling of a pre-World War II industrial building in a run-down area on the fringes of a city centre

BRIEF: Entries are to select a redundant building of at least 500m² and to show how it can be re-used (rehabilitated and re-used) for the city and its people. The brief is to be re-used for the city and its people. The brief is to be re-used for the city and its people. The brief is to be re-used for the city and its people.

ELIGIBILITY: The project is open to all registered students of Architecture at the University of Natal. Entries must be submitted to the Faculty of Architecture, University of Natal, PO Box 10159, Durban 4015, South Africa. The deadline for entries is 19 October 1998.

PRIZES: First Prize R15 000, Second R10 000, Third R1 000. The winner will be invited to participate in the competition and to receive the prize money.

SUBMISSION: Entries must be submitted in a hard copy and a soft copy (which will not be returned) and will be assessed by the Jury. The Jury will be made up of the following members: Prof. Ernest Barnard (University of Natal), Prof. Peter Davey (University of Natal), Prof. Charles Correa (University of Natal), Prof. Geoffrey Bawa (University of Natal), Prof. Peter Davey (University of Natal), Prof. Charles Correa (University of Natal), Prof. Geoffrey Bawa (University of Natal).

CONTACT: Mr. Peter Peters, KZ-NIA, PO Box 10159, Durban 4015, South Africa. Tel: (031) 21-7590; Fax: (031) 21-7586. Email: KZ-NIA@ukzn.ac.za

Barrie Biermann Architecture Library

The collections have been enhanced with a large donation of books *ex libris* Gordon Small, a bequest gratefully received.

Ex Libris
Gordon Small 1927-1995

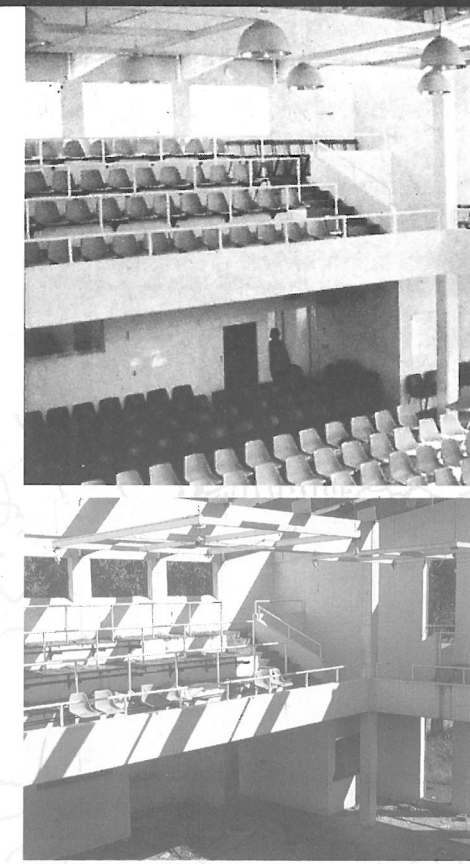
Principal in the practice,
Small & Pettit, Pietermaritzburg,
established 1965

President: Natal Provincial
Institute of Architects 1979-80

President-in-Chief:
Institute of South African
Architects 1980-81

Panasonic Student Competition

Greg Townsend, 3rd Year student at the University of Natal, has won the 1997 *Panasonic* air conditioning competition for architectural students. The prize is a trip to Greece for both student and lecturer as well as a company representative.



There can be little doubt that we are approaching architectural crossroads in South Africa. Enshrined benchmarks are being eroded as our society and its built environment normalise at a scale and intensity which neither can cope with.

One way to visualise our future is to examine the past. A starting point could be *NPIA Newsletter* 1/1981, with Wally Peters as the brand new editor. Apart from the alarming number of members in the Professional News column who have moved to greener pastures, horizontally or vertically, this edition featured the 1981 Awards of Merit. Top billing went to the Federal Theological Seminary of Southern Africa at Imbali near Pietermaritzburg. Notwithstanding the impeccable political record of Revel Fox, all that survives of these award-winning buildings is a series of colonnaded courtyards defined by salmon-pink facebrick walls and quarry-tiled

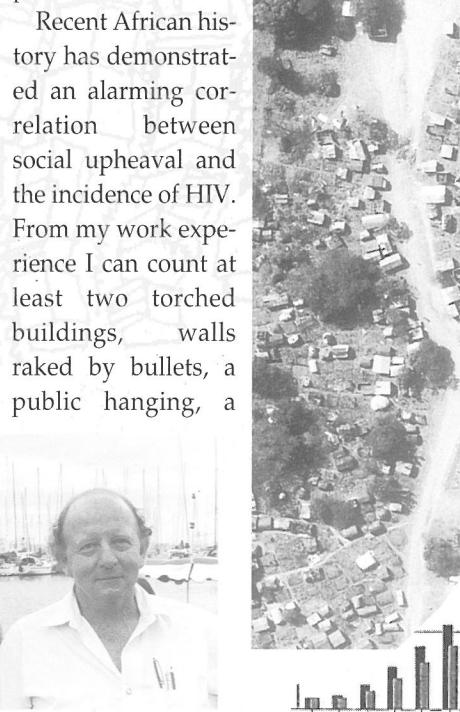
floors. The masterly footprint of a hierarchy of spaces is still evident within a run-away garden. The birdlife is prolific. Perhaps the time has come to search for other paradigms before we become strangers in our own land. Today about one quarter of the population of KwaZulu-Natal lives in metropolitan Durban. This primate city has some truly heroic projects, freshly graduated or on the CAD screens. Yet sixty percent of our residents live in shelters made of stabilised earth and recycled materials. The sordid reality of poverty is arguably countered by efficient delivery systems, technical and visual innovation, an appreciation for natural resources and a spatial hierarchy which is clearly demonstrated on the hillsides of Durban. This reality is assigned to other paradigms because of the enshrined suburban image of new little boxes on the new landscape. A glimpse into the future reveals the biggest challenge of all. In only five years time an estimated 21% of all children in KwaZulu-Natal will be orphaned as a result of the scourge of AIDS. (*Natal Mercury* 30/3/98). Already about 170 000 children have been absorbed into an incredibly supportive system of family clusters. In five years time, when these numbers rise to 660 000, radically different architectural solutions will need to be in place. Recent African history has demonstrated an alarming correlation between social upheaval and the incidence of HIV. From my work experience I can count at least two torched buildings, walls raked by bullets, a public hanging, a

COVER: The Federal Seminary at Imbali near Pietermaritzburg (top) in 1981 (Photo, John Oliver, Studio 3) and (middle) in 1997. Bottom: The late Justice Makha's home-stead in Mount Frere, Transkei, 1997. TOP: Multi-purpose church hall, Federal Theological Seminary - then and now. BACKGROUND DRAWING: Ekhuphakumeni at Inanda, north-west of Durban: spontaneous settlement along the contours. RIGHT: Rodney Harber with Charles Correa (left) who was visiting Durban in November 1997.

Other Paradigms
Editorial

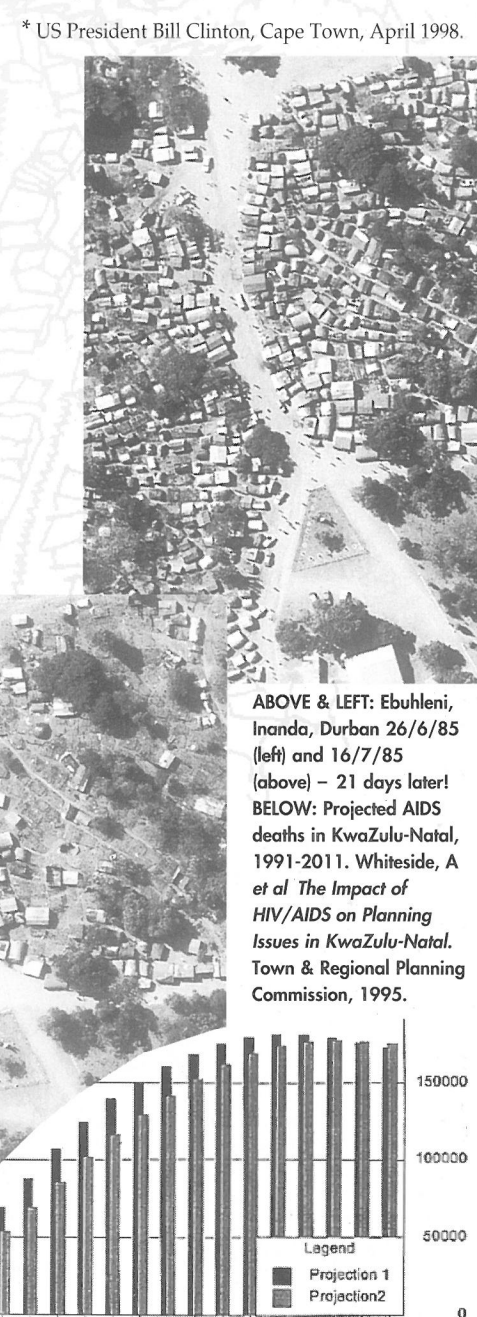
headless corpse exposed in foundations, and a client castrated in front of his house. This is not the stuff for "Sunday schools" but the reality of social upheaval and rapid change. Stabilised earth construction, AIDS, and social upheaval are mentioned to illustrate a point. Workshops arranged on these subjects by KZ-NIA recently attracted pitifully small numbers of architects. We must adapt. If "those who build shall triumph over those who tear down."* then the *Habitat Agenda 21* negotiated in Istanbul is a beginning. If architects are to prevail with creativity, imagination, foresight and compassion, then architectural education must be the focus for transformation.

Rodney Roy Harber
Professor Harber is KZ-NIA President and Principal: Harber & Associates.



* US President Bill Clinton, Cape Town, April 1998.

Projected AIDS deaths in KwaZulu-Natal, 1991-2011. Whiteside, A et al *The Impact of HIV/AIDS on Planning Issues in KwaZulu-Natal*. Town & Regional Planning Commission, 1995.



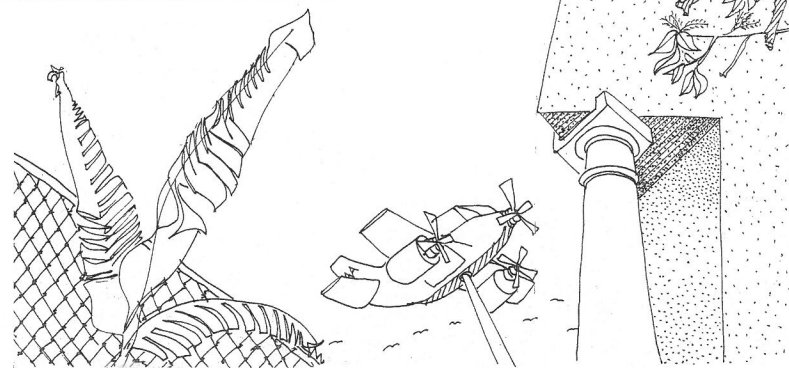
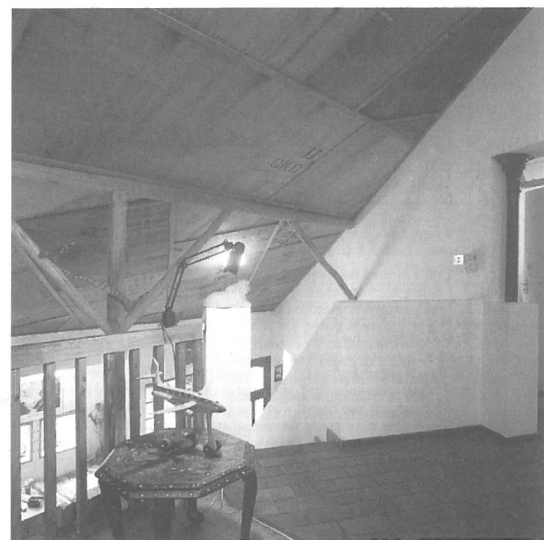
Other Paradigms

Nothing Wrong with Scrap: Recycled Materials in Contemporary Architecture

SOUTH AFRICA has as yet hardly been touched by the environmental movement and its ensuing recycling wave that hit parts of Europe and the United States in the late 1970s, where it is still in full swing. However, while Europeans focus on bottles and batteries, many South Africans are practising—out of necessity or interest—a different aspect of recycling: building with second-hand materials.

What immediately comes to mind are the ubiquitous shacks of informal settlements where indigent people, mostly Africans, assemble whatever materials they can find to create an elementary shelter for their families. Repellingly ugly and yet fascinating in their pragmatism, inventiveness and even—strangely enough—their aesthetic, these shacks are often amazingly well furnished inside and wallpapered with sheets of printed paper and packaging labels.

But the use of scrap is in no way restricted to poverty-stricken Africans. Increasingly public and domestic buildings designed by professional architects explore the exciting possibilities of building with second-hand materials. Probably the best-known and one of the most successful and creative examples is the colorful BAT Centre in Durban's harbour area. "We're a dirt poor nation. That, however, surely does



fully detailed wood-framed bay window lends dignity to the more formal meeting room, and portholes collected from old ships are suitably placed along the gangway-like bridge that connects the front building with the studio spaces. The portholes and other materials found directly in the harbour area moreover serve to contextualise the building, while the history of the old naval structure lives on in appropriated and functionally reinterpreted elements such as the gunracks, which now serve the resource centre as bookshelves.

The concept of building with recycled materials is neither new, nor 'African', nor indicative of inferior status—as many black South Africans tend to believe. The architectural history of Western civilization's 'high cultures' abounds with examples of construction with re-used materials. The Romans liked to embellish new public buildings with 'spoils', i.e. columns and other elements carried home as booty from other peoples' buildings. The pragmatic spirit of the early Christians quickly adopted a similar practice, re-using and re-interpreting, in turn, fragments of their 'heathen' Roman predecessors' architecture. Apart from the cost factor, the recycling thus became a symbolic gesture of conquest or appropriation and assimilation of another culture, archi-

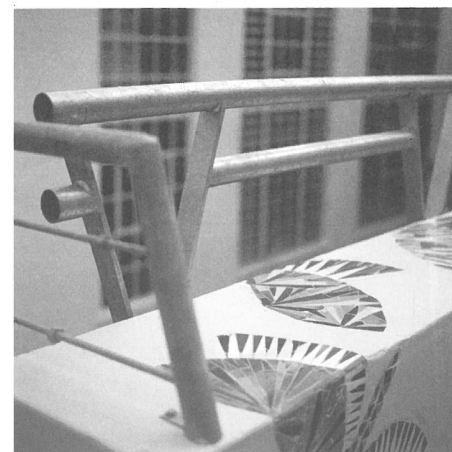


tecturally underscoring a political or ideological victory.

An even more important factor that has motivated people for centuries to re-use materials and is still driving the conservation and restoration effort today, is a deep-seated veneration for or of the past and respect for its architectural monuments. Examples of historic buildings that have been restored with old materials to achieve an authentic character range from Victorian homes in Durban to old mission stations found all over KwaZulu-Natal.

The late Barrie Biermann was probably the most renowned local architect to champion an eclectic approach to architectural design that could include re-using materials. In his own house in Upper Glenwood (1959), recycled materials were not restricted to actual building components such as windows and doors, but extended to a range of everyday objects, creatively modified and functionally re-interpreted. We find colorful pieces of old glass composed into sparkling, gem-like windows, Greek coins fused into some of the floor tiles, and timber railway compartment doors converted into benches and cabinets. The house is an amazing, multicultural amalgamation that integrates past and present, art and architecture, the built and the natural environment.

Following in this pursuit, Rodney Harber's Overport house and studio includes re-used windows, wood from disused Toyota crates, sculpture fragments from demolished Indian temples, and other recycled elements that reflect his preoccupation



with establishing links between past, present and future, and his concern for multi-culturalism.

The concern for incorporating personal memory and architecturally continuing family history, complements the cost advantage of recycling materials in Braeside, a house that Rodney Harber built for a couple at Franklin, East Griqualand, in 1990-94 (*NIA Journal* 1/1994). The client explicitly demanded the re-use of materials from his parents' home and trading store, which stood deserted nearby.

OPPOSITE PAGE:
(TOP) House Biermann,
Upper Glenwood, 1959.
(BOTTOM) House Harber,
Overport, 1980.
THIS PAGE:
BAT Centre, Maritime
Place, Small Craft
Harbour, 1995.

The beautiful, rustic thatched-roof house with rounded corners and eclectically-composed masonry walls is a fascinating symbiosis of old and new, organic and man-

made, "African" and "Western" architecture, which moreover features a number of ingenious low-energy solutions to climate control. Precast columns from the old building frame the entrance, dormer windows are made of discarded car windscreens, railway sleepers are used for window and door frames as well as the kitchen cupboards and even the pavement outside consists of recycled stone and boulders.

The growing acceptability of using recycled materials in contemporary architecture is essentially rooted in post-modernism's encouragement of eclecticism, conservation, concern with identity and a sense of place. Analogous to the arts, where the borderlines between 'fine art' and 'craft' have been eroded and appropriation has become the fad, the modernist notion of the "high art of architecture" has been questioned, opening the door for a much broader definition of what 'architecture' is or can be. Few people realise, for example, that building with recycled materials requires a complete reversal of the usual architectural design process. While the conventional architect will draft a structure and have the contractor purchase the necessary materials, the recycling architect must fashion the building to accommodate the components available. Moreover, materials might only be procured while construction is already in progress, thus challenging the architect's creative mind, and demanding frequent participation on site, flexibility, spontaneity and inventiveness.

This is certainly one reason, why designing with second-hand materials is not everybody's favourite. There are others: Janina Masojada and Michael Liebenberg, who have incorporated donated second-hand materials in some of their community projects in townships around Durban, and maintain that "the cost-saving factor cannot make up for the enormous time and energy cost involved in building with recycled components." Rodney Choromansky of CNN Architects, points out that building with recycled materials is not always cheaper. Furthermore, some materials, notably old timbers, might get architects into trouble with local authorities regarding the National Building Regulations. Another battle might

have to be fought with black South African clients who typically reject second-hand materials.

These problems cannot easily be brushed aside. Architects must be sensitive towards African communities' aspirations and we should be careful not to romanticize townships and squatter camps by euphemising the dire conditions of which that architecture is an apt reflection. As much as the use of second-hand materials can contribute to blurring the boundaries between "First World" and "Third World" architecture in South Africa, we must not lose sight of the fact that the use of scrap materials plays a fundamentally different role in an architect's studio to that in a squatter camp.

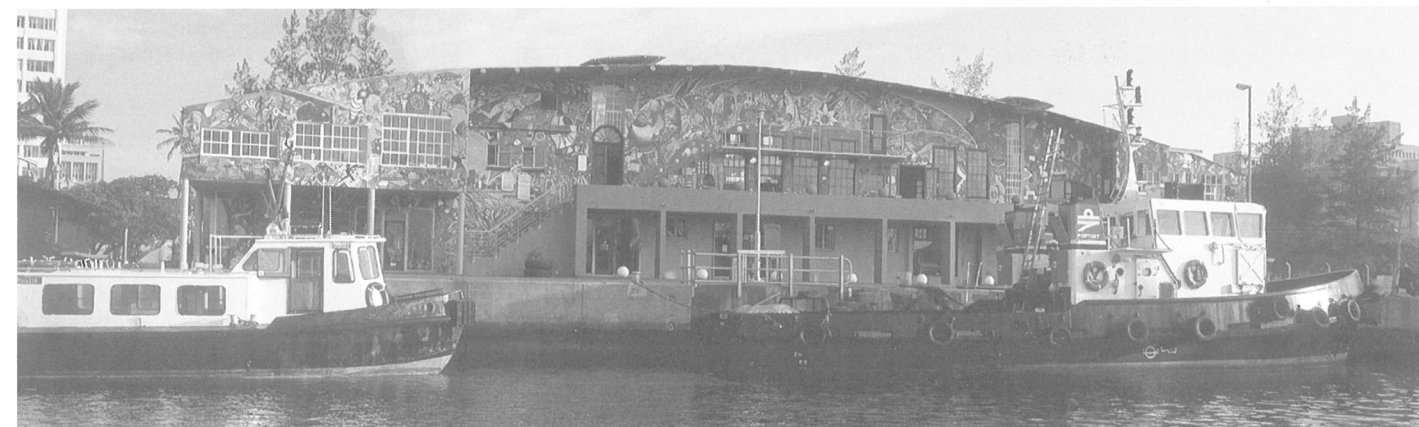
So what, in the final analysis, is the reward



for all the trouble? Building with recycled materials is an exciting way of creating a truly unique structure; a building with a strong identity and authentic character reflecting our modern consumer society. Since each component comes with a history of its own, the architecture amalgamates strands of narratives, investing the structure with multiple layers of meaning. If uniqueness and authenticity are what we value most in art and architecture, using recycled materials might be one way of achieving these!

Sabine Marschall

Dr Marschall is a Senior Lecturer in the Department of Fine Art & History of Art at the University of Durban-Westville





Yogesh Ramjattan

Other Paradigms

Motala Heights: An Expression of Wood and Iron

Most of the housing stock at the residential settlement of Motala Heights is constructed of wood and iron, an under-rated and under-documented form of construction yet significant to South Africa's building heritage. In 1995, second year students of the School of Architecture, University of Natal, Durban, undertook a study of Motala Heights, photographed and documented many of the houses and prepared drawings in pen and ink and gouache. This project was seen as a possible catalyst for a new appreciation of the many aesthetic and practical qualities of wood and iron construction.

The Settlement

Motala Heights was originally established around 1890 as a small agricultural community. Located within the northern boundary of Pinetown, it lies adjacent to the large Westmead industrial area, the expansion of which has resulted in a simultaneous growth in population and housing stock of this residential settlement. Motala Heights also attracted residents when the 1966 Group Areas Act forced Indians to evacuate their Pinetown homes.

Most of the residents are either tenants or sub-tenants and are either Hindu, Muslim or Christian. There are several churches and temples serving the community as well as various facilities such as a tea room, superette, crèche, doctor's surgery and school.

The nature of the settlement of Motala Heights is quiet and often termed 'rural' by its residents. It is located away from main roads, has little traffic, and house clusters are generally sited on plots of land surrounded by the remaining vegetation of the original agricultural lots.

House Clusters

Many of the two and four-room wood and iron cottages constructed from a kit of parts in the late 19th and early 20th century are still in use today with various lean-to extensions and alterations. A pattern of familial extensions has developed over time to accommodate young married members of the growing families. Today, many such extensions are let or sublet to other families. Corrugated iron has played a significant role in allowing for this familial extension, as it is an appropriate, inexpensive and recyclable material, easily removed from the external wall to be re-used on new walls.

The dwellings vary considerably in size and form, depending on the number of families each dwelling accommodates. An original cottage could house one elderly lady, while a substantial cluster could accommodate up to six households.

To some extent, the privacy of each household is maintained as each family is self contained within its own attached or semi-detached unit within a house cluster. Private areas within the dwellings are seldom shared between families, though ancillary ablution areas are often shared between more than one household.

The residential clusters at Motala Heights are neither too large nor too constricted as they have grown incrementally over time to suit immediate requirements, the patterns of clusters never being conceived as a master plan. Motala Heights' housing illustrates how a very real sense of community can be achieved by such patterns. House clusters in this context are typically more successful in supporting

community life than the single detached suburban dwelling. The spatial cluster draws people together, provides security for the family and supports neighbourly interaction and integration.

An Architecture of Extensions

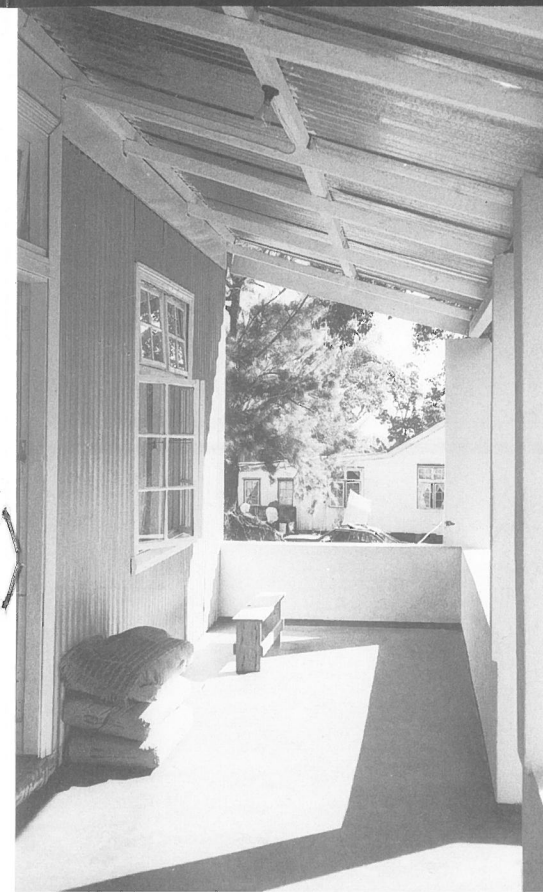
The built environment of Motala Heights is the result of an architecture of adaptations where layered horizontal patterns provide a visual record of the tastes and lifestyles of the former residents. A tactile quality of form and space mirrors the often unpredictable nature of the processes of life, growth and repair. This continuous adaptation of the built environment consequently modifies the external environment where variously sized spaces between buildings serve as outdoor rooms, service yards, entry courts and passages between house units. A clustered, though seldom overcrowded, built environment provides outdoor places for eating, entertaining, play, washing and bathing.

House and Garden

Any additional space is usually cultivated as flower and vegetable gardens. While providing nourishment for the family, the planting of gardens around the edges of the house is also a climatic tempering response to the limited thermal characteristics of non-insulated wood and iron construction. Planting also goes some way to soften a built environment,

"The pattern of settlement at Motala Heights illustrates a symbiotic relationship between variability and constancy where lean-to and gable forms, and wood and iron detail, is constant throughout the settlement, yet is interwoven with expressive layers of individual responses to the habitation of garden and home. Leafy edges and spatial variations between extensions prevent visual interest from ever being exhausted."

Jack Cheng



Michelle Quarumby

often rather frayed around the edges from its many adaptations.

The gardens at Motala Heights are not the hedge-clipped, lawn-mowed, leaf-raked gardens of typical suburbia. They are not taken over by garage doors, driveways and maintenance-free foliage. These gardens are small and intimate realms directly supporting a family's needs for shelter and nourishment. These gardens are simple yet intense, providing both sustenance and pleasure.

At Motala Heights there is a primary connection between two functions of habitation; building houses and growing food. A garden requires constant care and maintenance to ensure an ongoing enjoyment of reflection, provision and connectedness to the earth and the life-cycle of nature. While the intense use of outdoor space and garden in this context is undoubtedly a response to both the physical and the economic climate, perhaps it is also a cultural response reminiscent of the rich and sacred gardens of India where the softening of external space with gardens reveals the joy of inhabiting space.

A Context of Wood and Iron

While the garden provides a link to the life-cycle of nature, the architecture of extensions at Motala Heights provides a link to the life-cycle of the family. The adaptability of corrugated iron has significantly contributed to this link and a study of Motala Heights housing in itself could provide not only a valuable connection to South Africa's past but also

renew our appreciation of an often misrepresented building material.

The wood and iron housing stock at Motala Heights generally consists of timber framing with exterior iron sheathing and sometimes with internal lining. Framework, corner posts and top and bottom plates are of 4 1/2 and 3 inch timber. The original corrugated iron sheets did not have a distinctive inside and outside face which allowed the end corrugations to be fixed with the roll facing upwards. The corrugated edges of the vertical sheets over corner posts were simply wrapped around each other and nailed to the posts with drive screws. Most of the houses at Motala Heights are built on timber or brick foundation piers with a suspended floor system, allowing a crawl space often used for storage.

The roofs of the original houses were gabled, hipped or hip-gabled forms typical of prefabricated wood and iron houses of the late 19th century. Although most of the windows and doors at Motala Heights were timber box framed, many hang directly from the timber stud framing, especially in ancillary buildings. Many original buildings still possess shaped iron awnings with hand-cut ornamental edges and Victorian style barge boards, finials, architraves and doors.

However, many of the more recent fixing and detailing methods fall short of the standard of workmanship evident in the original housing stock. Many of the residents at Motala Heights complain about the poor insulation and leaking roofs of their houses. While planting gardens around the house and painting the iron in light colours goes some way to alleviating thermal problems, the residents experience overheating in summer. Although the iron roofs rapidly cool the houses at night, daytime temperatures and levels of humidity are often unbearable, especially in houses where maximum horizontal extension has resulted in minimum floor to ceiling height, allowing very little air circulation. Other inefficiencies characterised these wood and iron structures such as the use of the sliding sash window where only half of the window allows for ventilation.

A Tenuous Future

The settlement of Motala Heights faces an uncertain future due to the encroaching expansion of the neighbouring industrial area. Without house ownership and little security of tenure, the residents do not have the financial power to control their future and any repair to

their dwellings will be makeshift. While spatial needs may be well accommodated, the construction of additions and repairs often falls short of meeting the needs for healthy habitation and the future of Motala Heights housing stock is therefore tenuous.

The rich historic housing stock, the evocative expression of space and form, and the established communal pattern of house clusters provides a strong motivation for the conservation of the settlement of Motala Heights and for an immediate repair and upgrade to the existing housing stock. This would inevitably be a less traumatic, more convenient, cost-effective and sensitive approach to accommodating the future residents of Motala Heights than constructing new settlements in far-flung areas. If an upgrade is to be implemented, it would need to be sensitive to the existing fabric by accommodating new wall linings, insulation, more substantial fixings and details to allow roof and cross-ventilation.

Since 1995, one third of the housing stock at Motala Heights has disappeared and much of the remaining stock has been remodelled in brick construction. The corrugated iron previously enriching the fabric of space and form is rapidly disappearing, and a less expressive pattern is the result. This can only be the outcome of the residents' dislike of corrugated iron and the perceived stigma associated with the material.

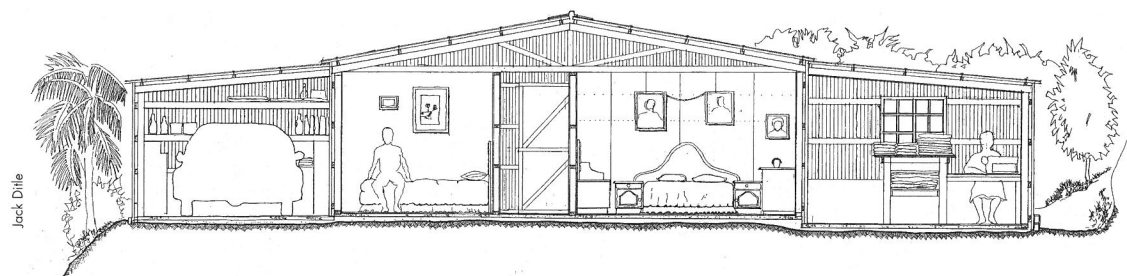
It is our role as architects to encourage a more prolific use of corrugated iron in a variety of contexts in the future. Only then will the poor image of this extraordinary building material be able to change. The settlement of Motala Heights could indeed be utilised as an appropriate precedent for housing processes to meet the future demands for low-cost housing in South Africa.

Kellee Aspinall

Ms Aspinall, Lecturer in Architecture at the University of Natal, hails from New Zealand.

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Jack Dille

Other Paradigms

Creating a Learning Culture: Preparing our Graduates to Work with Diversity and Complexity

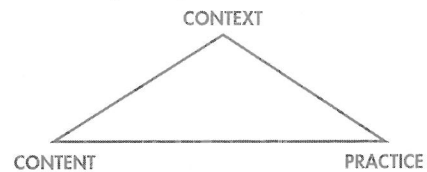
Educational Philosophy

The School of Architecture at the University of Natal aligns itself with the three major operational changes proposed by the Vice-Chancellor's Review (September 1992) aimed at achieving Quality with Equity, namely, substantial curriculum reform; the creation of a learning environment; and the integration of development into the mainstream of University activities. It also seeks to implement the educational goals of the University as espoused in the preamble to the Mission Statement 1989: The University of Natal strives to serve all sections of its community through excellence in scholarship, teaching, learning, research and development.

For the School, these notions have not been embraced only at the level of rhetoric. The idea of transformation as being a commitment to ongoing invention and reinvention, not only at the level of structures and procedures, but in all that we do, is a hallmark of the School. At the beginning of 1995, after a long period of deliberation involving staff, students, and other stakeholders, around the current curriculum, it was decided to put in place an inquiry-based student and learning-centred, educational programme. This approach is referred to as Problem-Based Learning (PBL) at Schools of Architecture elsewhere in the world, but the staff feel that they have developed something unique to their circumstances.

Curriculum as the Key to Transformation in the School of Architecture

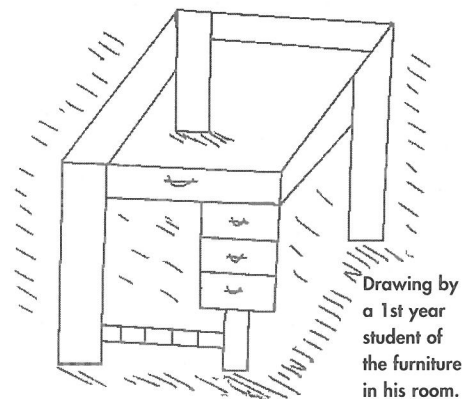
Problem-based learning is not a new form of orthodoxy, replacing more traditional forms of architectural education. What it means, is that the curriculum is no longer organised only around individual subjects, but that content is integrated around problems, which students are required to research as individuals and in groups—hence the notion of being student-centred and inquiry-based. Curriculum, defined holistically as what is taught and what counts as knowledge in the field, as well as how such content can best be taught and learnt, has to take account of the diverse perspectives and experiences of both teachers and learners, as well as the contexts of practice in which our students will be working. This dialectic may be represented as follows:



This means that the curriculum is never set in stone: as a staff, they engage in innovation, investigate the outcome of this innovation (and reflect on the intended and unintended outcomes of the innovation), and use the experience derived herefrom, as part of an ongoing process (including feedback from students). This is what is meant by educational transformation in the view of the School. Such a view is compatible with what Donald Schon in his books *The Reflective Practitioner* and *Educating the Reflective Practitioner* suggests is necessary

to prepare creative practitioners who are able to work in a variety of unfamiliar contexts as members of teams, and are able to identify and

assist in the interpretation and solution to a range of unfamiliar and complex problem situations. A commitment to this philosophy has some other implications:



Drawing by a 1st year student of the furniture in his room.

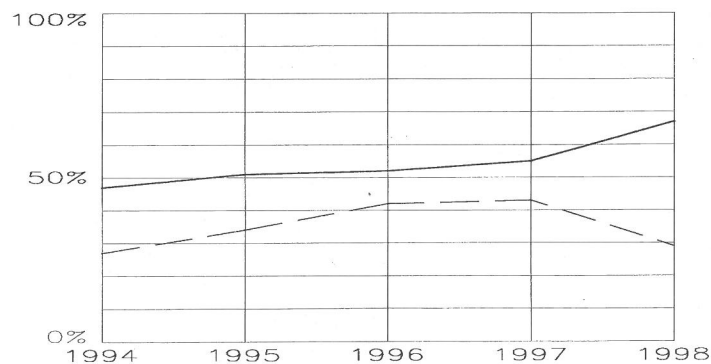
• Such an ethos enables staff to select a design problem around which a particular programme is organised, one the staff feels is relevant in the local, regional and broader context, and which exposes students to diverse problem situations. These should also be sufficiently robust to challenge staff and students to new ways of thinking and learning together, while being intellectually challenging to enable students to experience in a rigorous way the core concepts of a architecture.

• Staff use in a much more conscious way, opportunities for exposure to the local built environment through problem situations that are defined. Through this process they are not simply looking to the North for architectural icons.

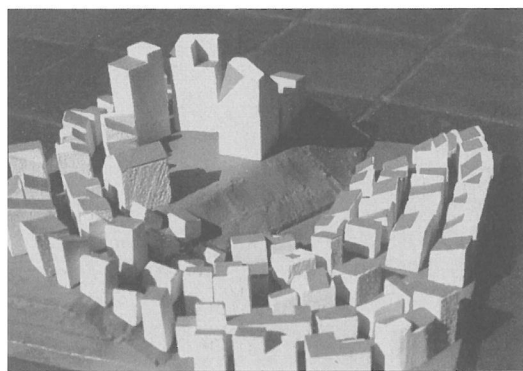
• It is an approach to teaching and learning that provides an environment that not only encourages group work, but actively develops and rewards skills of working together in diverse groups—managing the diverse perspectives that learners from different educational and cultural backgrounds bring to the process of problem and concept definition, and resolution. Appreciating multiple perspectives and diversity is at the core of the programme.

• Students' critical capacities are developed

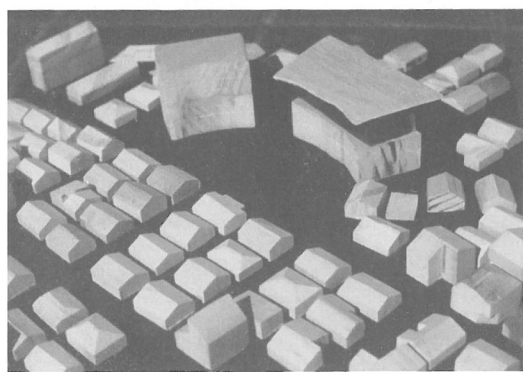
to prepare creative practitioners who are able to work in a variety of unfamiliar contexts as members of teams, and are able to identify and



RIGHT: Student composition at the Natal School of Architecture. The unbroken line represents formerly disadvantaged students who currently compose 67% of the total, while the broken line represents female students, currently 28%. Not shown is the foreign student contingent, 22% of Year 1 in 1998.



LEFT: Designs by students for a small town: Top—There is a hierarchy in the urban form and a major open space. Bottom—The uniformity of the foreground is perhaps conditioned by a township upbringing.



from the start of the educational programme: peer and self assessment ensure that students internalise criteria from the beginning.

• The power imbalance between teachers and learners is addressed, and the teacher is seen as part of the team, rather than as sole arbiter and judge. Such imbalance has also been addressed through the demystifying of assessment criteria and making these explicit from the beginning of the programme, in line with the desired learning outcomes for each programme.

• The tension between quality and equity is managed in the educational programme, by fostering and rewarding excellence, while at the same time acknowledging that the kinds of capacities desired (knowledge, aesthetic appreciation, environmental appreciation, competencies, values and attitudes) require a period of time to develop. Therefore the first major summative assessment (gate-keeping assessment) is at the end of the third semester. Formative assessments aimed at maximising learning and providing feedback about progress to both staff and students, are a feature of the assessment processes.

• A student-centred, inquiry-based approach makes particular demands on a library resource, as students are required to do a great deal of independent research to address the learning goals which they identify around each problem situation.

The Barrie Biermann Architecture Library is a collection that has been built up over a period of almost half-a-century, and serves not only the Faculty of Architecture and Allied Disciplines, but the broader community, especially members of the KZ-NIA, Technikon students, and school children in the region. It has an extensive collection of art and architectural books, journals, reference works and an invaluable collection of works on early architecture dating back to the last century and earlier. The estimated number of volumes as at the end of 1997: is 22 600, with an estimated value of R5 million, while the journal collection (with current subscriptions to 97 journals) is valued at approximately R1,5 million. The technical reference collection (including historical drawings) is valued at approximately R40 000. Thus the resource base that provides support for this challenging academic programme is considerable.

Examples of traditional and PBL assignments for a trading stall:

TRADITIONAL ASSIGNMENT

Design a mobile food stall for the sale of a take-away food of your choice, for trading at flea markets and sporting events in and around Durban.

DESIGN OBJECTIVES: The object of this exercise is to explore the synergy in design ideas between product, packaging, promotion and facilities which house these processes.

TASK: Investigate the siting requirements for a flea market stall in Durban as well as the regulations governing the transportation of such a mobile stall on public roads.

Make proposals for the food stall, the packaging of the food stuff, as well as a menu and any signage that may be necessary.

SUBMISSION: Submit your preliminary proposals in colour on A3 paper.

PROBLEM-BASED LEARNING ASSIGNMENT

Flea-markets have sprung up all over the place and are making "pots of money". Smith and West Streets are lined with pavement vendors—you seldom need to go into the shops anymore—you can buy everything on the street

After looking at the options you agree that "food is always good business": fast, tasty, cheap, nutritious—on the street, flea markets, sports functions. You promise to explore the idea with your superior, visionary, visualisation skills and agree to:

- Select a type of food—wors rolls, candy floss, ice cream cones, pies, whatever?
- Make suggestions for the design of the cart / stand / whatever?
- Look at the issue of marketing, signage, packaging, menus and the presentation of your submission.

Derek van Heerden

Student Composition

The composition of the student population further reflects the School's commitment to transformation; namely to providing learning opportunities for students from a range of educational and cultural backgrounds to ensure that diverse perspectives enrich the educational programme.

Conclusion

The experience of the Natal School of Architecture over a number of years has revealed that it is possible to transform an existing School and in the process, to promote both excellence and equity. The view of transformation adopted here is far broader in its scope than that traditionally adopted, and, contrary to the view put forward in a recent

study conducted by *Architects Support Group for South Africa*, does fundamentally question the philosophical and pedagogic underpinnings of architectural education within the transformational context. Accepting the irreplaceable value of resources, such as staff and a fully-stocked architectural library, as well as the importance of location in stimulating ideas for programmes and student exposure to authentic situations, any proposal to establish a fresh school of architecture, patently on ideological grounds, is a non-starter.

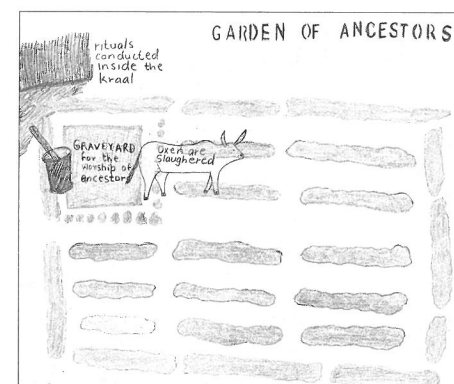
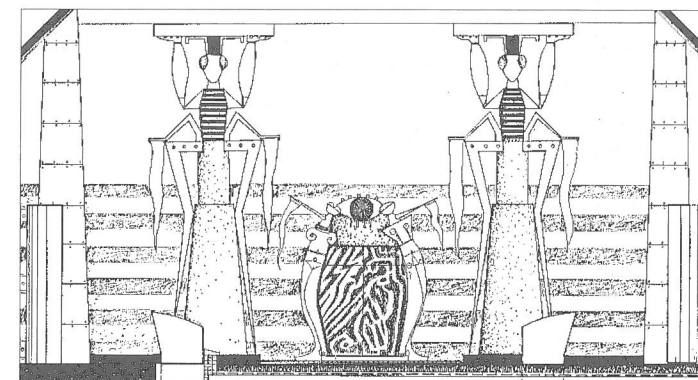
Megan Senekue

Mrs Senekue, formerly Faculty (of Architecture) Education Development Officer, is currently co-ordinating the University of Natal Centre for Leadership in collaboration with the Kellogg Foundation.

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- Schon D (1983) *The Reflective Practitioner: How Professionals Think in Action*. Basic Books.
 Schon D (1987) *Educating the Reflective Practitioner*. Jossey-Bass Publishers.
 Low, I & Smuts C (1997) *A New School of Architecture in South Africa*. Daedalus Press, Johannesburg.

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ZOOMORPHIC IMAGES. ABOVE: Final year student re-interpretations of caryatids: Entrance details to an Academy of Animation. Design Thesis by Gina van de Verre, 1991.
 LEFT: 1st year design of a "Memory Chamber" for which person the student chose Shaka Zulu, 1998.

Other Paradigms

Justice for Justice?



Off the N2, beyond Mount Frere, Transkei, an eccentric collection of buildings emerges in the landscape. On approach, along the donga road, one is presented with a fantastical building with the most spectacular irreverence for conventional building styles and practice. Here Justice Makha created a homestead celebrating a cacophony of eclectic columns, decorated porticos and flying beams all crowned by an African cherub.

The building became the site of adventurous design experimentation for a man only instructed in bricklaying, plastering and electrical wiring. Makha was a casualty of the old paradigm where 'everyone taught (him) how to build, no-one taught (him) how to design.

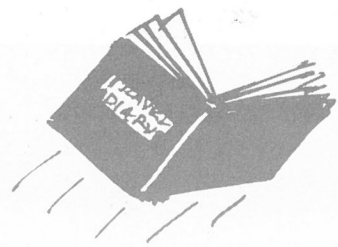
After constructing several buildings in the Johannesburg area, Makha, half blinded by

cataracts, returned home to create for the first time, his own spectacular epitaph. Against the backdrop of the 'American Flat', the typical design style of the area, Makha set out a rudimentary linear plan which he then heavily embellished along the external route leading from one room to the next.

The following extract is a letter received in our office. 'Unfortunately the person you written to, died on the 11 April 1997. The person who is replying now is his wife Mrs Princess N. Makha.' It is debatable whether instruction in design would have inhibited the fantastical elements of his homestead but, more importantly, his menial training precluded him from the opportunity to express himself elsewhere.

Nina Saunders

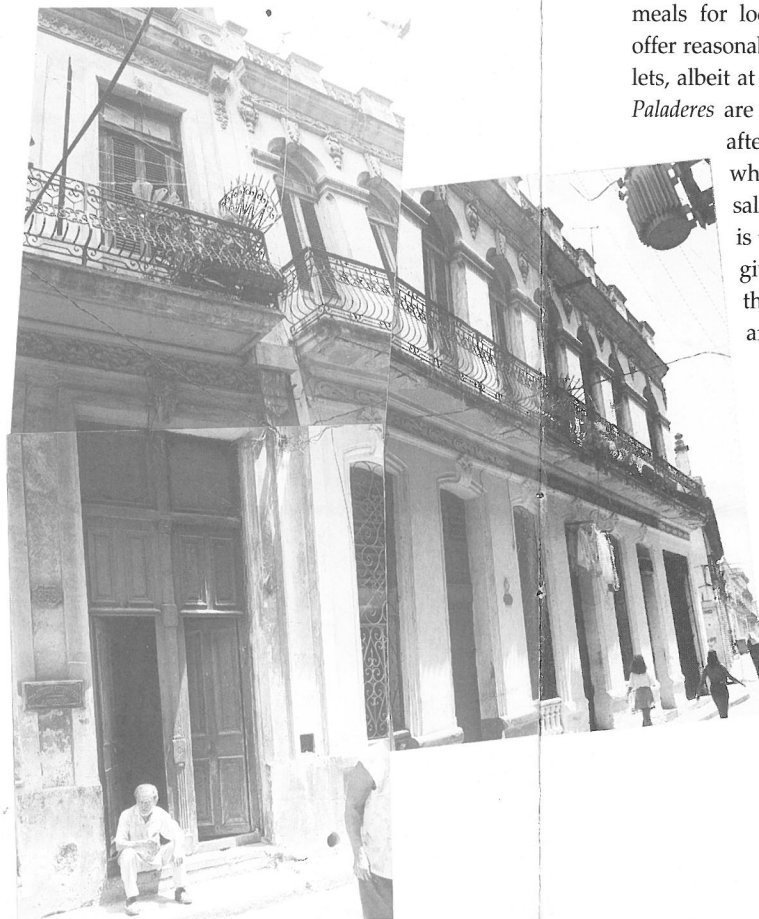
Ms Saunders works with Harber & Associates



A Travel Diary – Havana

During late March to early April 1998, a congress on the revitalisation of old urban centres took place in a most appropriate venue, the old centre of Havana, *La Havana Vieja*, in Spanish. The venue itself, the Convento de Santa Clara, (opposite page far right) (built 1644) is a sensibly restored historic convent wrapped around a double courtyard and well worth a visit. As can be imagined, the equatorial climate with a very high humidity and fairly even temperatures demands such spaces and they are often the most charming and comfortable public spaces. Add to this a 500 year old legacy of Spanish discovery (Christopher Columbus no less), a lone example of functioning communism, and the varied inhabitants of this tropical island, and an extremely complex but intriguing recipe emerges.

The old city, next to the harbour, was planned in 1674 and demarcated with defensive walls. The craftsmanship of masonry (top right) to churches and monastic courtyards, the proportions and details of official *Palacios*, (below) and the spacing and shape of urban



squares are of the finest quality, unlike a colonial mock-up! In the texture of crooked, narrow streets, detail surrounds one at a three-dimensional level, with the grated ironmongery of barriers and balustrades from which bags are lowered to couriers at street level. The street is used to the utmost as an extension of the living spaces, as very few public spaces exist. Schoolchildren often "crocodile" past from one building to another as no official school premises exist in this part. Communal eating houses or small pastry shops offer basic meals for locals, but restaurants and hotels offer reasonable fare for more demanding palates, albeit at a much inflated US Dollar price.

Paladeres are home operated restaurants and, after a long journey to *El Bistrot* which advertised vegetarian food, a salad or *enchalada* (without tortilla) is the closest available, and at \$7 no giveaway. The journey crossed into the region of Altos, where streets are assigned numbers or letters on

the post-revolution grid, and it's best to move along the winding Malecon road skirting the sea, and cutting in near your destination.

Some of the most striking features remembered are part of the street life itself, from the range of huge American finned vehicles floating past bicycle taxis, picking up *chicas* (young ladies) in tropical attire, to Salsa and Samba music blasting from cafés and radios. The musicians play in Miramar, a seaside Deco resort stemming from the American era of the indulgent Mafia. Local classical music from a string consort was stunning, reminiscent of Iberian and modern American composers. The Prado is a promenade leading to the seafront, along which are the Capitolio and national theatre, facing a busy park. Behind these buildings one can find the Upmann and Partagas cigar factories, the latter probably the



best venue for purchasing, although factory visits were temporarily suspended.

It may be worth considering some optional routes for reaching Havana, as it is an expensive journey from South Africa. I chose the most direct route with *Air France* to Paris and *Air Cubana* to Havana, requiring a change of airports in Paris. A visa for Cuba is obtainable from the embassy in Pretoria within days, and the staff were most helpful. Further, it is advisable not to drink tapwater – mineral water is fairly, freely available. Most transactions are done in US Dollars if you are a visitor, but fruit or snacks at local markets or shops are priced more reasonably in Pesos (not officially available to visitors). Remember to keep some Dollars for unexpected official items, like an airport tax of \$20 not mentioned prior to passing "passport control".

Leon Krige

Mr Krige is a Lecturer in Architecture, at the University of Pretoria.

The island state of Cuba, 217km south of the tip of Florida, is the first communist republic in the Western Hemisphere. Havana is located toward the western end of the island, rimming one of the Caribbean's finest harbours. Because of its geographic position, Havana was a port of call for Spanish ships travelling between the colonies in America and the Iberian Peninsula.

