Habitat as a means to architecture

The work of Adele and Antonio Santos deals with reconciling the differences between the values of users and formal traditions of Modern Architecture

Three years ago, before Adele Naudé Santos and Antonio de Sousa Santos came to the United States to join the faculty at Rice University in Houston, Tx, they gave up a promising, ten-year-old professional practice in South Africa. In that partnership they concentrated virtually exclusively on issues of housing, and from that period seven projects are presented here.

In explaining the nature and content of this work, it is helpful to know something of the background of Adele and Antonio Santos. She was born in South Africa but is a British citizen who attended the Architectural Association in London. She holds master's degrees in architecture from Harvard and in city planning from University of Pennsylvania. He is a Portuguese citizen born in Mozambique who holds an architecture degree from Cape Town and master's degrees in architecture and in city planning from University of Pennsylvania. Both worked for David Crane & Partners in Philadelphia, where their own practice officially began. Urban design and architecture together, both in practice and in teaching, have led to the concept that the physical environment forms a continuum across scales. The Santoses' theoretical position has its origins in problems of housing, where buildings are seen less as abstractly conceived objects and more as micro-environments, even in the most modest of individual buildings.

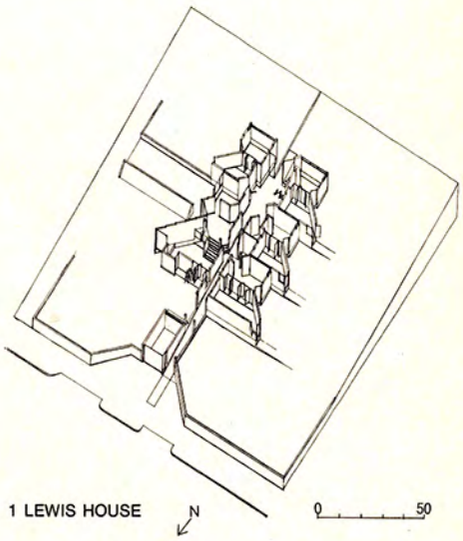
The use of user needs

An essential feature in their approach has been the extent to which so-called "user needs" operate within the design process. In contrast to the position that behavior can be controlled or at least strongly influenced by simple functional schemes of a prescriptive nature, the Santoses believe that behavior is essentially unpredictable and that a more fruitful objective is to remove or reduce potential functional conflicts and offer a range of environmental conditions that would not constrict behavior. In this fashion, the design process must be circumstantially responsive to patterns of use. While user needs and values, systematically interpreted, become important determinants of programs, they also become important determinants of form, providing not only multiple conditions for use, but also multiple opportunities for interpretative adaptation by the user.

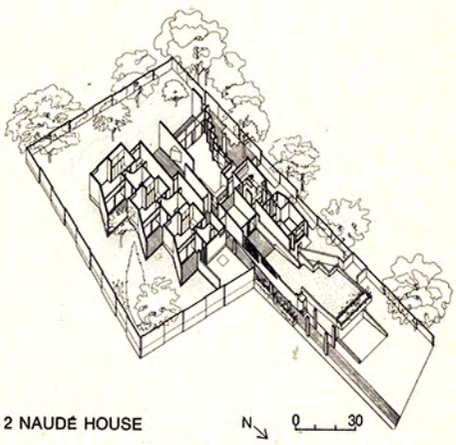
Yet, the basis of this process should not be interpreted simply as a variable response to circumstances. A greater part of the thread that runs through the projects is due to the essentially normative position described by the resolution of particular programmatic/formal synthesis, if not in actual total *partis*, then in fragments that may appear in differing forms.

The linear spine seen in the seminal project, the Lewis House of 1965 (illus. 1), established a principle of organization that operated at a number of levels. Essentially, it distinguished "public" from "private" areas, although its actual functioning, depending upon user and purpose, would vary across this spectrum. With the Naudé House of 1967 (illus. 2) the principle has been refined. It becomes more complex and elaborated in the individualization-within-a-theme of the Rowan Lane grouping of 1973 (p. 66), where the concept no longer operates purely in plan, but also in section and with respect to both internal and external relationships. Finally, the inevitable thread can be perceived in the cluster plan for the Vernon Road subdivision of 1970 (illus. 3). While this one particular principle can be clearly seen through the sequence, it is in the Vernon Road scheme that another pattern is nearly equally apparent, the pairing of carports and garden walls to increase visual scale toward the street for the detached houses. A comparison with the housing at Kromvlei (p. 68) shows this principle at work, both in organization and form, even though they are barely one-fifth the cost of the former.

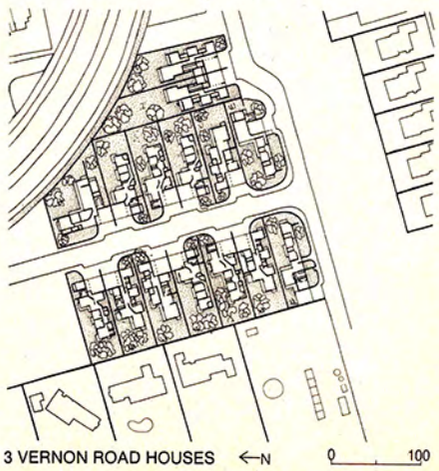
The normative nature of these design decisions can also be seen in fragments and details that are elaborated and ma-



1 LEWIS HOUSE N 0 50

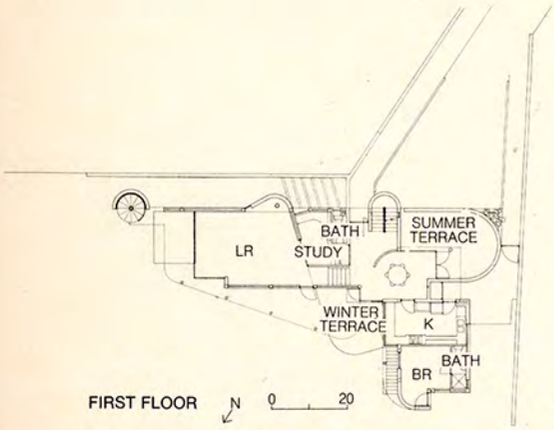


2 NAUDÉ HOUSE N 0 30



3 VERNON ROAD HOUSES ←N 0 100

Stekhoven house



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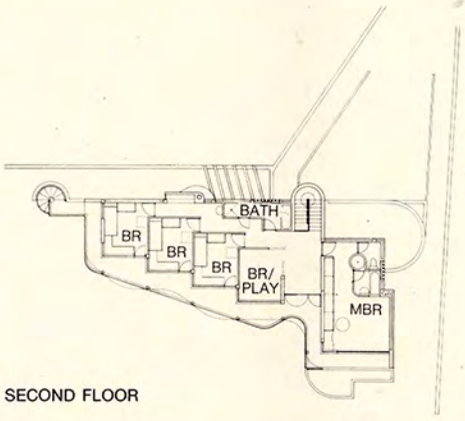

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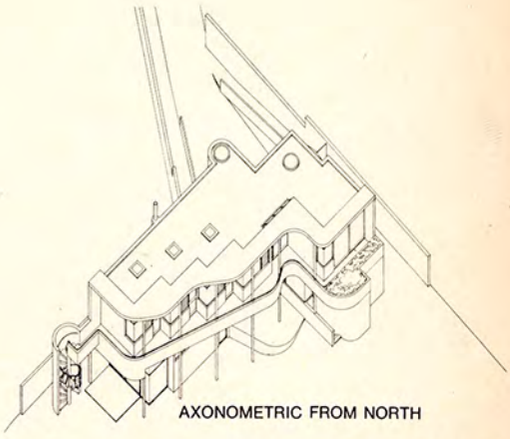
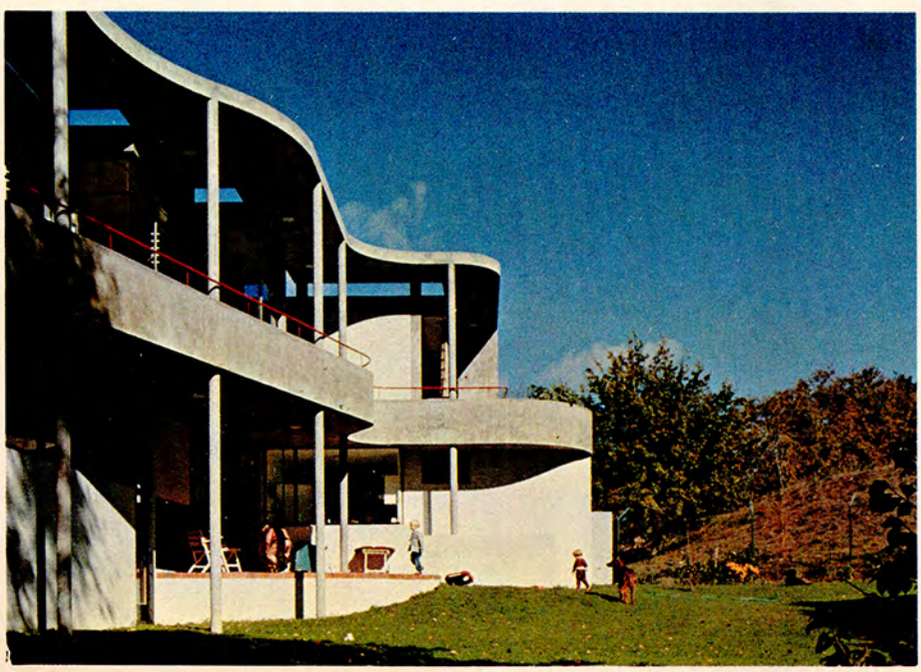
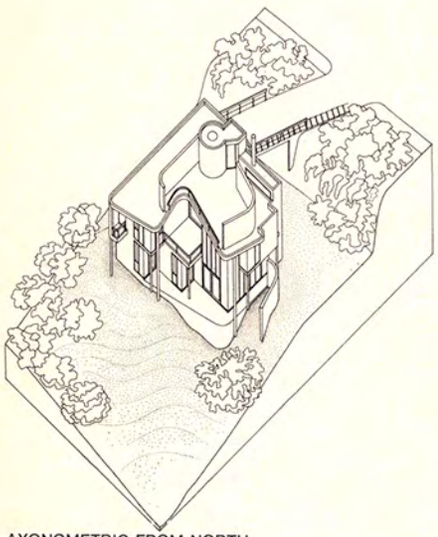

AXONOMETRIC FROM NORTH



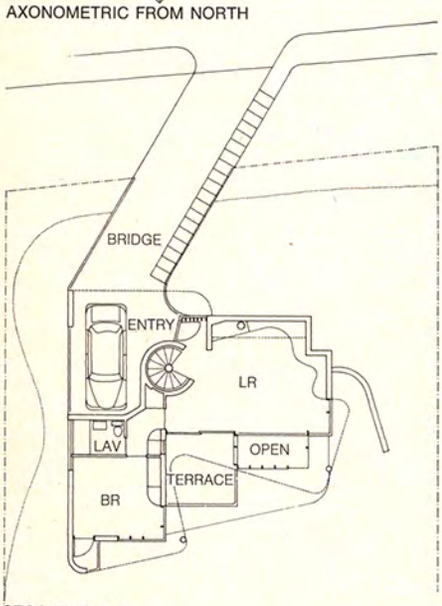
At the Stekhoven house (1973) in Newlands, Cape Town, South Africa, a blank white wall faces adjacent properties to provide privacy at both levels (above left), while at the opposite side of the house large glass areas protected by undulating loggia and access terrace open the house to private yard, sun, and view (left). Inside (above), a sliding wall separates the living room area from an adjacent study.

Profile: Adele and Antonio Santos

Shear house



AXONOMETRIC FROM NORTH



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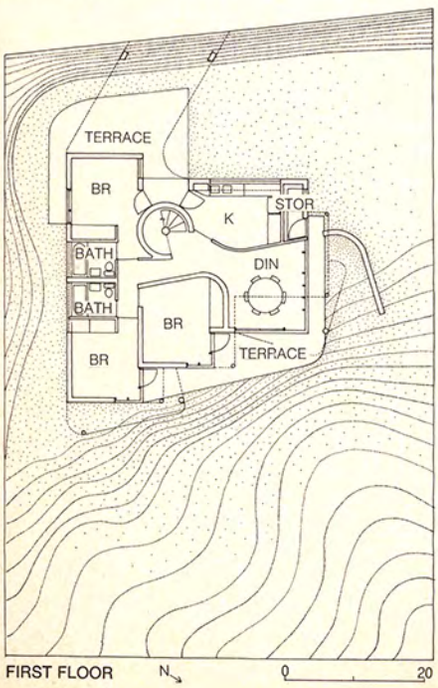
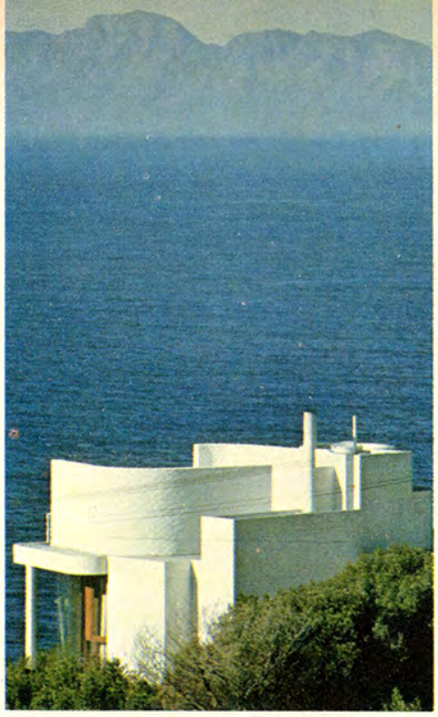
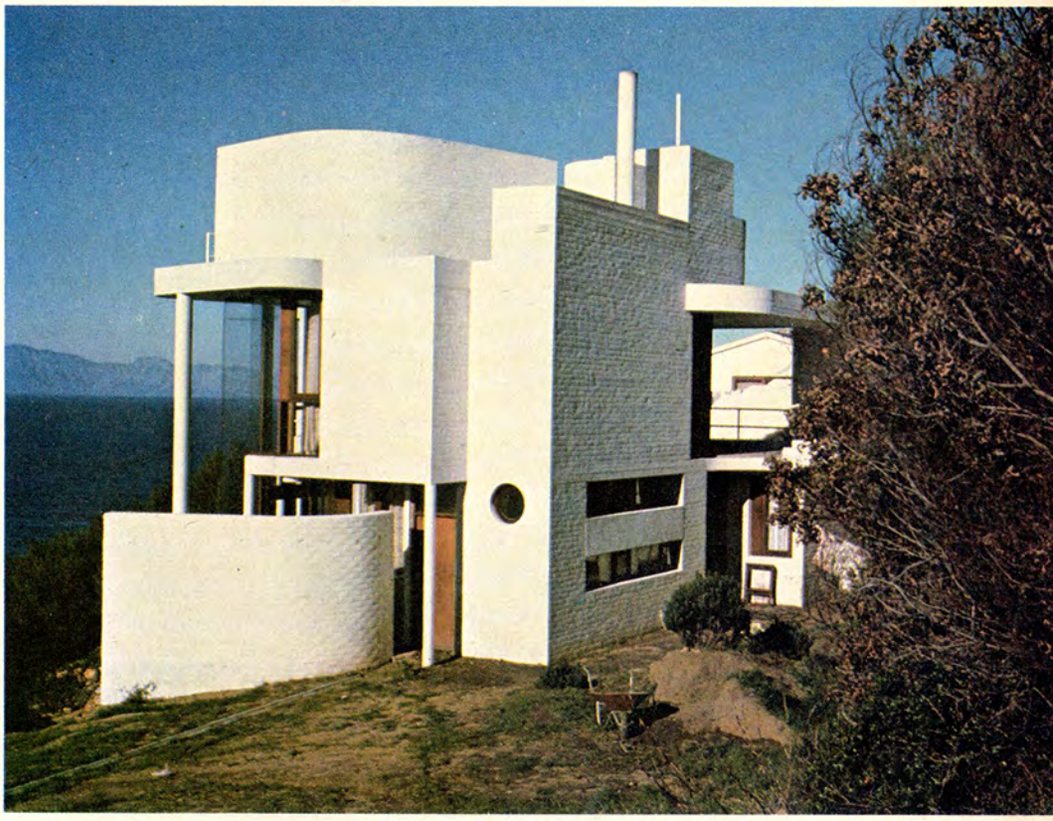


FIRST FLOOR N 0 20

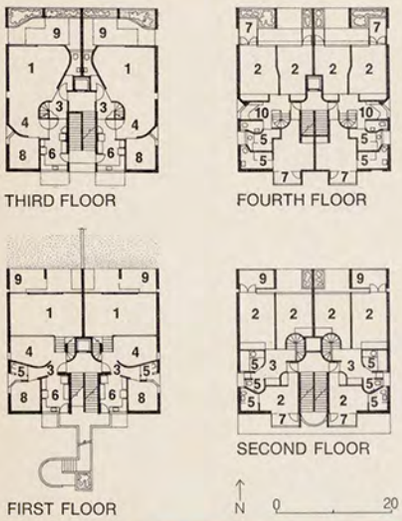


Solid walls protect the back of the Shear house (1973) in Simonstown, Cape, from strong winds.

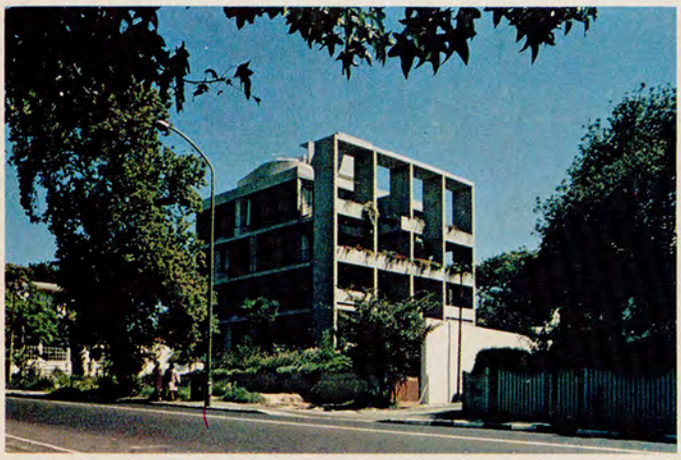


The house is nestled against steep hillside, but northwest side (below) opens to distant view.

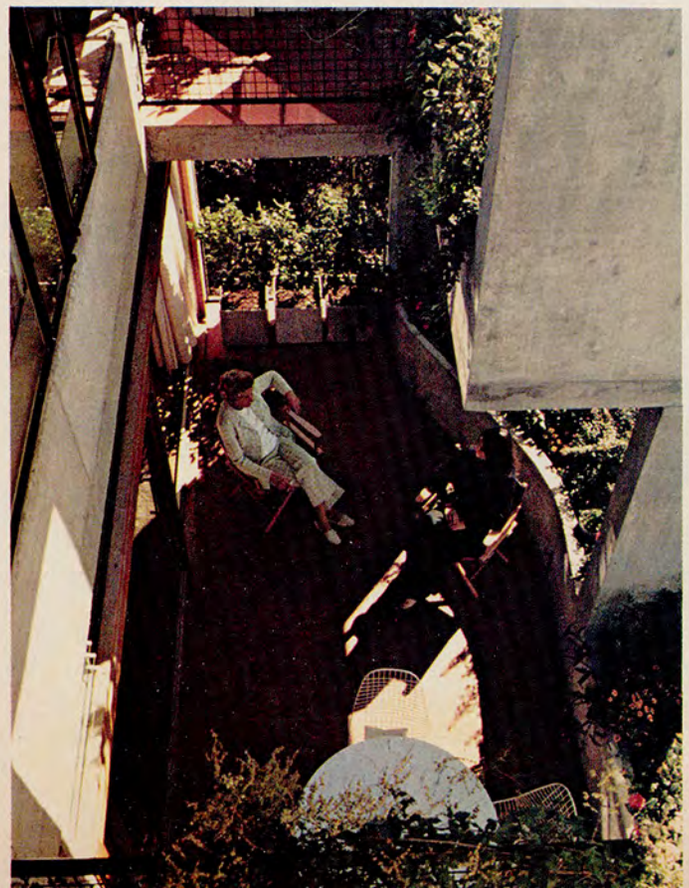
Scott Road apartments



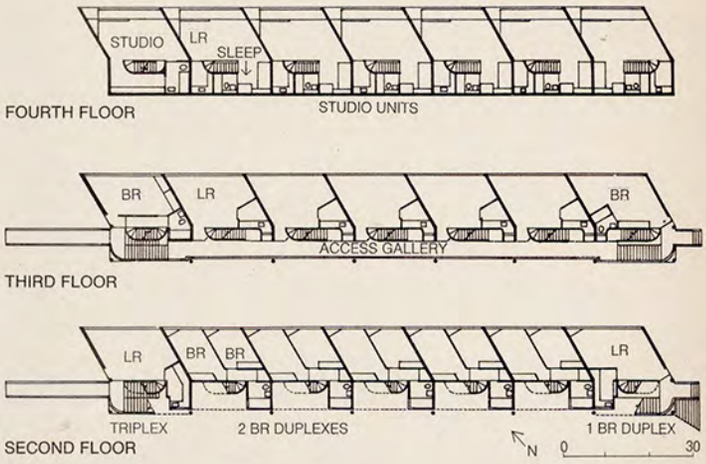
Legend
1 Living
2 Bedroom
3 Lobby
4 Dining
5 Bath/Lav
6 Kitchen
7 Balcony
8 Study
9 Loggia
10 Work



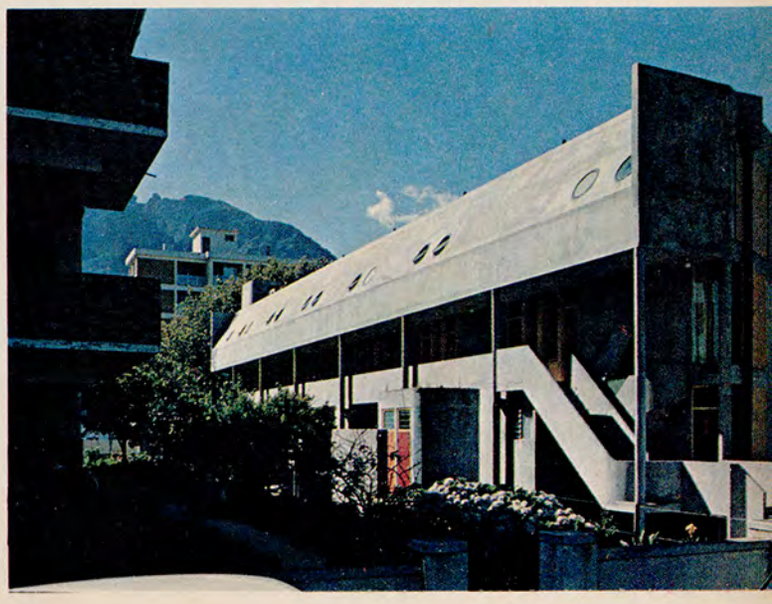
Scott Road apartments (1971) in Claremont, Cape Town. North loggia screen (above) is system of gardens, terraces, and balconies (below).



Iona apartments



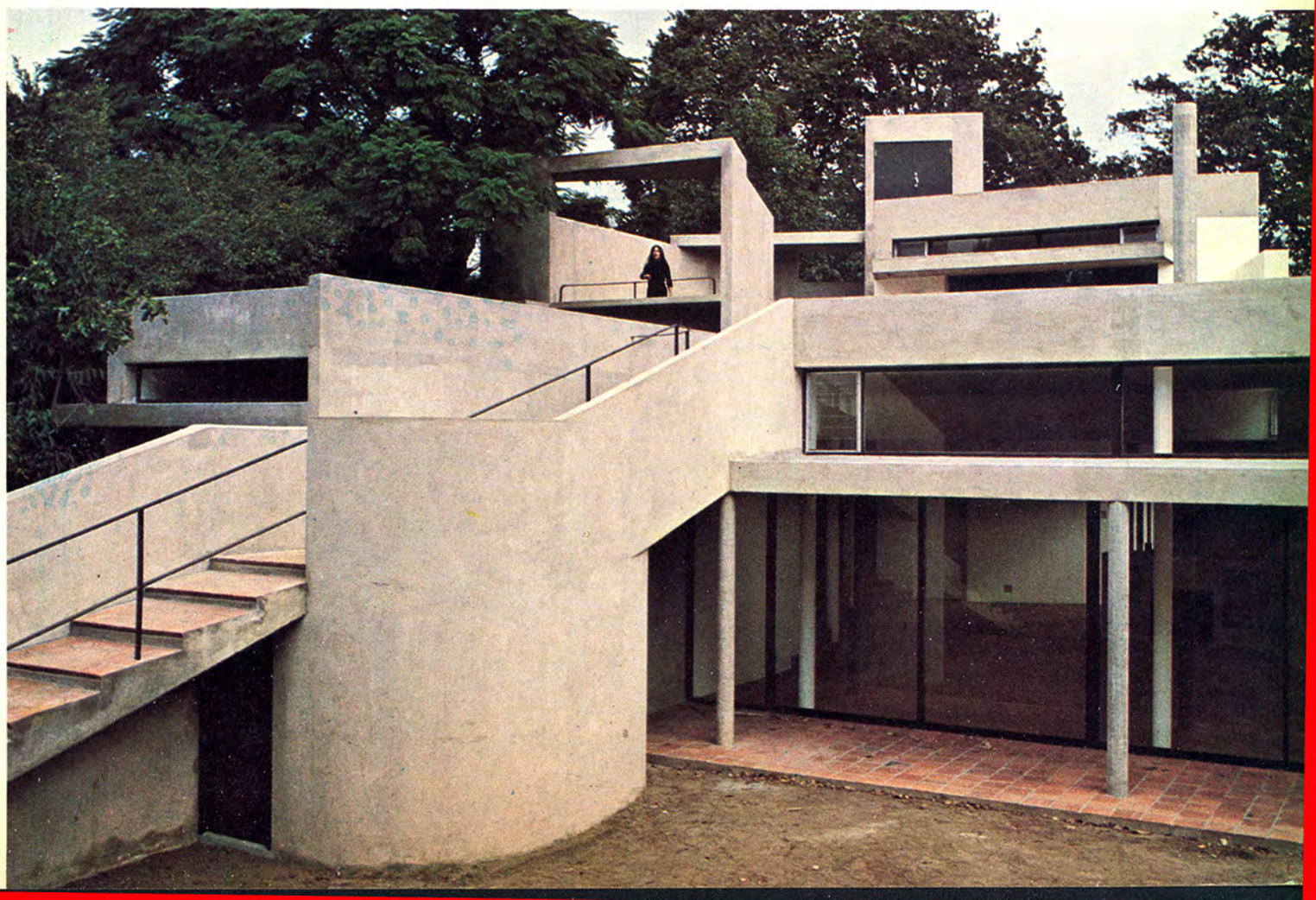
Mid-level access gallery (above, below) at Iona apartments (1971) in Rondebosch, Cape Town, ties complex combination of units together.



Profile: Adele and Antonio Santos

Rowan Lane houses

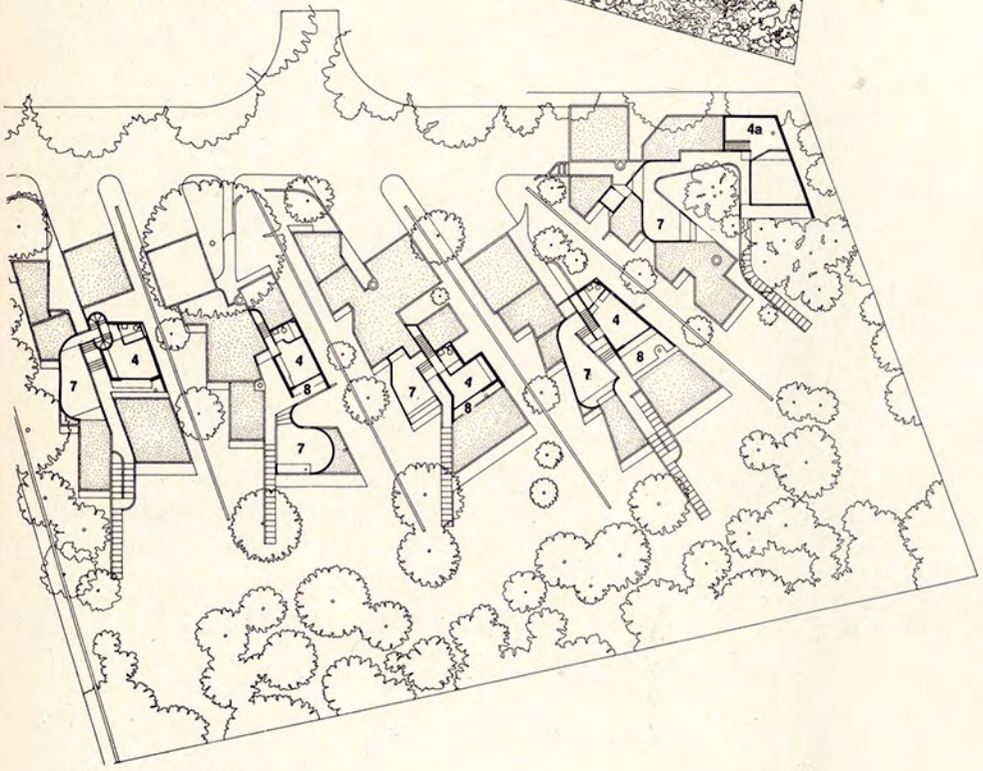
Existing trees were a crucial determinant in siting the five houses at Rowan Lane (1973) in Kenilworth, Cape Town. Stair to Unit C's roof terrace (below) separates ground-level living and sleeping areas, and the same pattern of division between public and private areas is repeated at Unit E (bottom). In double-height living room of Unit A (right), stairs lead to upper-level study that looks over roof terrace.



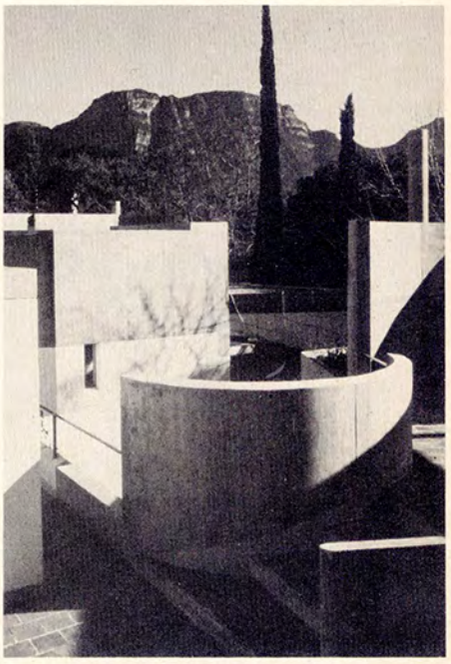
AXONOMETRIC FROM NORTH
(SHOWING EXISTING TREES)

Legend

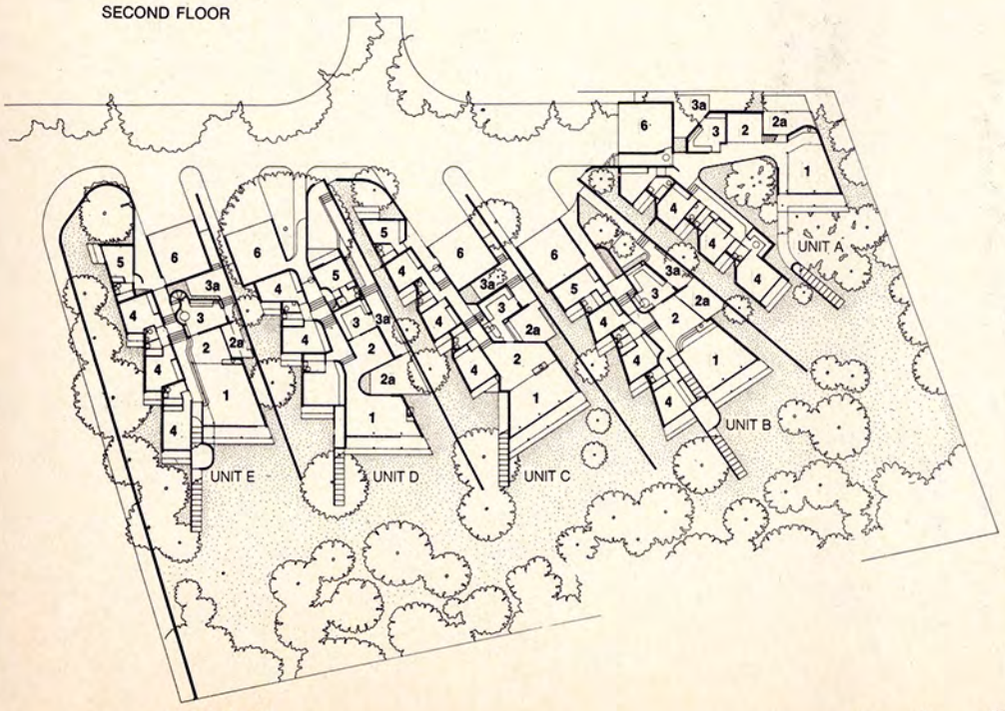
1 Living
2 Dining
2a Dining patio
3 Kitchen
3a Kitchen yard
4 Bedroom
4a Study
5 Independent suite
6 Double garage
7 Solarium
8 Terrace



SECOND FLOOR



Roof terrace solarium of Unit D (above), and corner of Unit A's private courtyard (below).

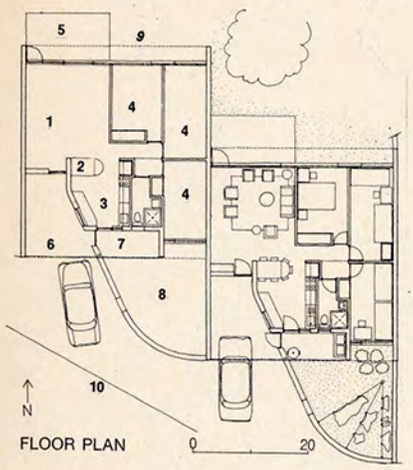


FIRST FLOOR

N 0 30

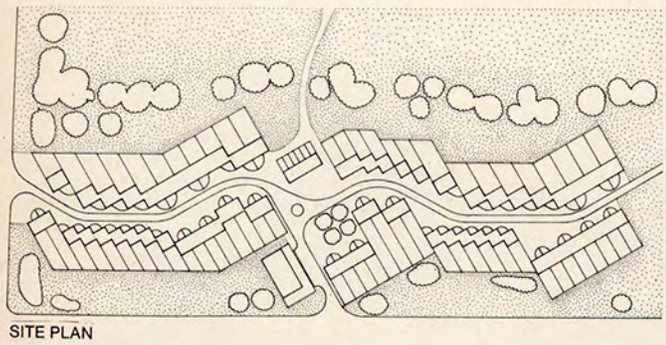
Profile: Adele and Antonio Santos

Matsapa housing

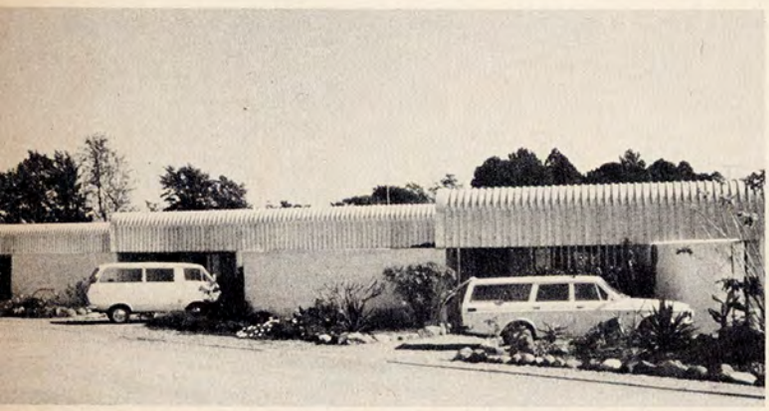


FLOOR PLAN

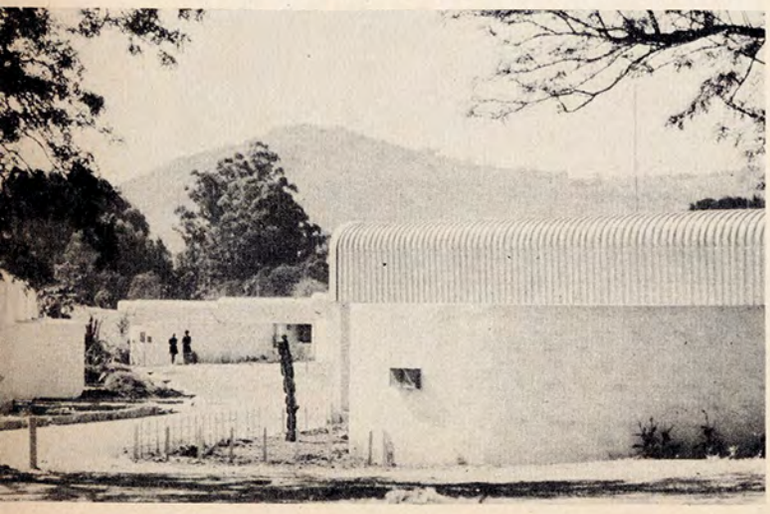
Legend
1 Living
2 Dining
3 Kitchen
4 Bedroom
5 Porch
6 Verandah
7 Laundry
8 Yard
9 Garden
10 Street



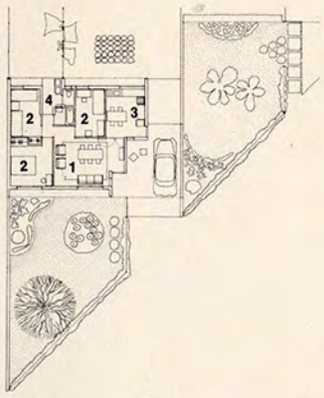
SITE PLAN



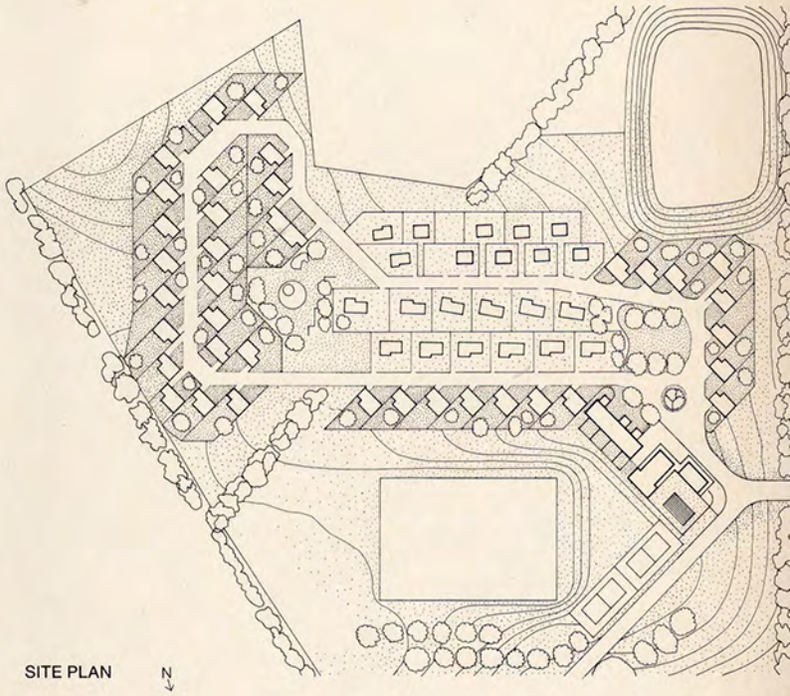
At the Staff Housing for the National High School (1974) in Matsapa, Swaziland, system of diagonal lot placement maintains individual unit identity (above); connecting of units serves to define street (below).



Kromvlei housing

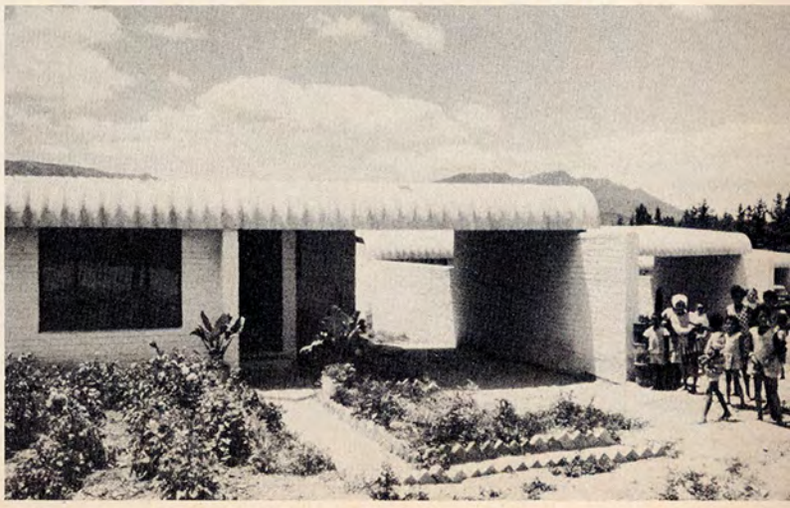


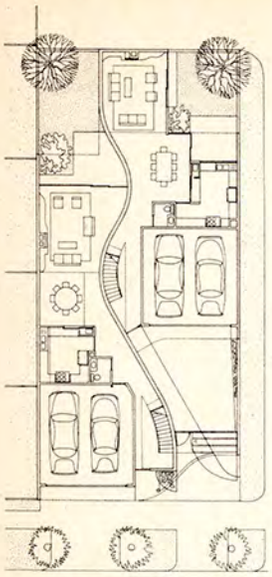
Legend
1 Living
2 Bedroom
3 Kitchen
4 Bath



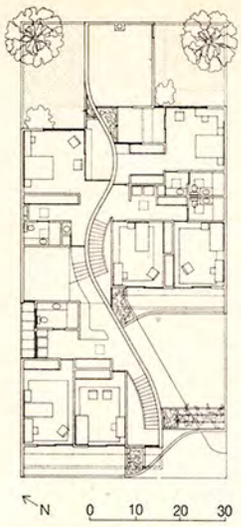
SITE PLAN

Lateral garden walls at the Kromvlei Workers' Village (1972) in Elgin, Cape (below), enhance continuity of street façade and allow separation of front and rear exterior areas, which are observable from kitchen.

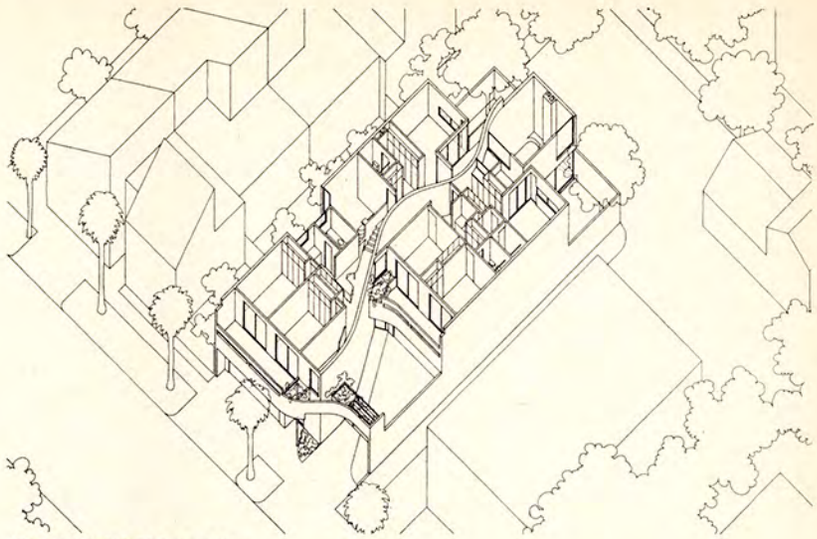




FIRST FLOOR
4 HOUSTON HOUSES



SECOND FLOOR



AXONOMETRIC FROM NORTH

nipulated with an authority which, when perceived in terms of the larger body of work, constitute elements of their personal style. For example, the Stekhoven House (p. 63) has a winter terrace on the north side (north being the principal sun direction below the equator), which is covered by an access gallery on the second floor. This access gallery is cut back, however, so that the sun will penetrate the terrace in winter months. The same detail occurs at the Shear House (p. 64), again for a terrace. While the Shear House is organized to shield open outdoor areas from strong southeast winds, the terrace, adjacent to the living room, is both shielded by the overall configuration and similarly covered by a canopy identically cut back to admit sunlight. The two houses—one linear, the other centralized—both contain a detail handling of an identical condition that underscores the rigorous adherence to fundamental principles running through the Santoses' work.

Vox populi

If the basis for the general strategy in design lies with the anonymous "user," then what role is played by formal aesthetics, and how are these aesthetic decisions to be reconciled with the context in which they operate? The Santoses are conscious of this dilemma, for their concern with the way the user "reads" the environment inevitably raises issues of formal language and its symbolism.

The architect is faced with the problem of being the product of a "learned" tradition from whose values the users are relatively alienated. In this regard, the work of the Santoses is critical of the Modern Movement. Although they recognize in that tradition forces still with us, their interest in Modernism is not a narrow or academic interpretation, nor are they interested in dabbling in historicism. They see the key to the professional dilemma in the esoteric aesthetic of Modernism and in the alienating characteristic of its abstraction, which produces an exclusiveness that prevents the development of a vernacular. In their work, the Santoses have sought to reintegrate evocative references, to suggest associations, to leave open "completion of the picture" by addition of sentimental set pieces by the user, without resorting to trivial, kitsch, or perverse exploitation.

Operationally, this attitude constitutes a conscious countermeasure to the esoteric aspects of the Modern tradition. The envelope containing activities, both internal and external, is not conceived of as an object, but frequently results from a process of assemblage, with different images for activity areas. The Santoses are frankly willing to push and ride romantic associations as far as possible in order to soften the aesthetic decisions whose roots remain in the Modern tradition. The most apparent overtones in the projects appear to recall the work of Le Corbusier and Alvar Aalto, never used "correctly" but rather in a synthesis with practical problems.

The loggia for the apartment building on Scott Road (p. 65) recollects many Corbusier *brises-soleil* while it articulates and qualifies light and view, controls sun and wind, creates a layer of visual privacy, yields a protected outdoor space as an extension of the units, and generally places the four three-bedroom duplex units in an active relationship with the environment as a whole. Furthermore, the loggia presents an evocative image, since it contains a profusion of planting, providing an appealing nonarchitectural reference in contrast to the overall clarity of the scheme.

The Iona apartment (p. 65), a complex mix of unit types within a single linear organization, serviced by a single access gallery at the middle floor, was earmarked for a student rental market. Its inflected interior walls were the result of angled parking below due to site constraints, the direction of view and optimum orientation, and a feeling of spaciousness within each unit, since the total permissible width was 20 feet.

At the Matsapa (p. 68) and Kromvlei housing (p. 68), staggered and diagonal lot configurations were generated to maintain both a unified scale along the public street and individual identity of the units. The exterior spaces serve varying purposes, and they also extend interiors outwards and permit control over public and private sides. One situation involved row houses (Matsapa) and the other detached ones (Kromvlei), but the basic house form is the same, modified to suit the context.

The five houses on Rowan Lane (p. 66) combine an Aalto-like fan-shaped site plan with building elements recalling those of Le Corbusier. More significant, however, are the variations between units, even though each aspect of the rooms maintains a consistency within this variety. Another factor in the development of the design was maintenance of existing trees

At both the Stekhoven (p. 63) and Shear House (p. 64) the principal constraints were the irregular sites; their principal generative forces were hard, closed sides on public approaches with an opening out to view and orientation on private sides.

Houston footnote

A recent project for Houston, Tx (illus. 4) indicates that rigorous adherence to design objectives, articulated in a variety of scales, can lead the way out of a virtually impossible situation. Two town houses, each requiring two automobiles, were planned for a lot approximately 32′ x 80′. The party wall became serpentine to generate positive and complementary negative design conditions to either side. The units are not identical, but rather mutually reinforcing. For each gesture in one unit, there is a corresponding trade-off in the other. An examination of the solution on this basis yields no compromises, but rather reconciliations of goals for each unit.

The result is a logical extension of the principles which informed the Santoses' earlier work. The architectural synthesis is a complex conjugation of a language generated from basic environmental needs, with the authority of a working knowledge of the Modern tradition. What occurs is an accommodating assemblage, a partially and deliberately incomplete architectural statement inviting participation by the user in the design process, and promoting a personal bond with the environment that no complete, custom-made exclusive design could ever yield. [Peter Papademetriou]