



HOME AWAY FROM HOME – SCHOOL AT MAMELODI

Maria Montessori argued that a school should be a second home for children. But the purist might object to the idea that the school should be anything other than a school. When you go to any city, any town or any village, you can easily identify whether a building is a school or not, irrespective of whether it is a good piece of architecture or not. The institutional nature of the type is always overbearingly present. Therefore to design such an institution/school is a commonplace; it is a more sophisticated business to remove that rigidity in order to make something more significant for children, or as Montessori perhaps meant: that feels like a home.

THE HUMANITARIAN CONCEPTION of 'school as home' is particularly important for South Africa, especially in schools in informal settlements where we are yet to provide decent homes for the previously disadvantaged.

Architects such as Hans Scharoun and Herman Hertzberger not only subscribed to Montessori's view, but extended it. In his schools, Hertzberger conceives and equips each classroom as a unit, a house in itself.¹ Scharoun designed the unrealised Geschwister Scholl in Lunen, Westphalia (1962), as a neighborhood of classrooms, built to create for its students a continuity between the home and school environments.² The spatial profile of classrooms was varied according to the age range they accommodated, and to the particular characteristics of their site situation.

Fortunately, we do have architectural practices that hold humanitarian concerns of this kind as core values of their practice.³ Humphries Jooste is one of them and he has a body of work⁴ which unfailingly addresses the needs of the poor, often using

means that bypass the cumbersome Government bureaucracy. He does so without polemics or radical pretensions, but simply by procuring projects and realising them effectively, with each building being a good example of its kind. The Meetse-a-Bophele primary school at Mamelodi, Tswane, is a new example of his radical, but very practical, approach to an architecture of necessity and empowerment.

The school of about 3 600m² is composed around three courts of near triangular plan form. They converge towards what is termed a nutrition centre, with covered outdoor and indoor seating areas for meals and a tuck shop. The centre is seen as the focus, where the children are ensured one square meal a day at least. The triangular form of the courtyard enables a north orientation to as many classrooms as possible. With the simplest of variations in roof section, glare-free lighting and effective cross ventilation is also achieved. In addition, there are two Grade R classrooms close to the administration block, with their own courts for a play area and sand pits. The computer room and library are located on the



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east of the administration block. There is also a sports field with a rugby/football pitch and a netball court with its own changing facilities. Part of the budget for landscaping was spent on tunnel facilities, where fresh vegetables can be grown for the children by some thirty trained ladies from local communities. There is also a workshop and a house for the caretaker.

The school is a donation by the ArcelorMittal group as part of their drive towards socially responsible industry and as a way of showcasing the potential of steel systems. It is constructed out of IPE portal frames bolted to raft foundations, considered suitable for all ground conditions, thus rendering the system used here applicable to a wide variety of contexts. The steel roof sheeting is fixed to top-hat steel section purlins. Cladding rails and the framework of partitions are also of steel and so are the insulated external claddings and the windows, which are powder-coated. Steel is used for furnishings such as tables, shelves and seating, too.

The need for the existing school to function during construction meant that the work had to be phased. It took 13 months to complete the entire project – half the time that would be needed to build a school of this size using conventional means.

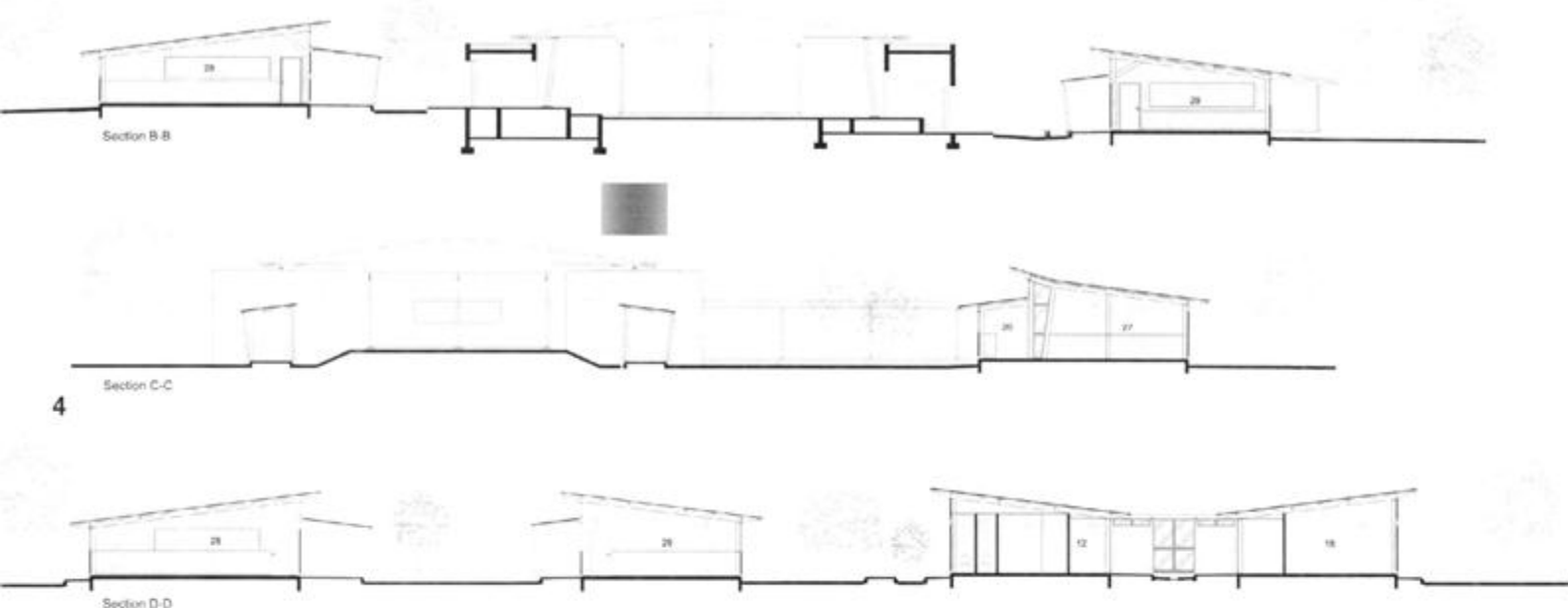
Humphries Jooste believes that the system can be used for other building types and is at present working on a primary healthcare centre at Sebokeng Hospital, which will adapt the system. If the history of system building in Europe is anything to go by, the temptation is to relentlessly repeat the form and constructional



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1 Northern entrance view.
2 Plan.
3 Walkway leading to nutrition (a tuck shop), with assembly area on the left.

Primary School



constructional system, which usually pronounces its demise. Hopefully Jooste is resourceful enough as a designer to avoid this pitfall. Already, the school shows that within the generic system variations in sectional profile are possible and this potential can be explored further. From other projects of his own practice, Jooste knows that hybridity rather than a puritanical application of a singular system is more suited to a developing world like ours, as it creates more opportunities for skills training.

In this context, speed of construction cannot be the ultimate aim, not only because everything else is slow in our part of the world but also because enduring architecture needs time to settle before we may learn from our experience. As Bertrand Russell once put it, 'The first prize in philosophy goes to the slowest.' And so it is in architecture.

With all this said, it was wonderful to see a school, which from site planning through to landscape to the design of classrooms and other spaces, is a thoughtful piece of work. In the process,

the architect has ensured that the school typology can remain healthily mutable.

Officialdom, particularly in education, tends to freeze building types into stereotypes.⁵ Historically, a number of strategies have been used to break this debilitating stagnation. One is that of engineering a stylistic shift through what can only be called an art/theoretical and intellectual stance. The Smithsons tried to do that in their 1954 Hunstanton School in England. But we can safely say this building had a negligible effect on the evolution of the typology of schools and so theory alone may not be enough. Neither does technology on its own help in a progressive evolution of ideas on design. After all, as the distinguished Phillipino architect Bobby Manosa once put it, 'When we import technology we import culture'.

The system used for the Mamelodi school is a total import. But credit must be given to Jooste for adapting and transforming what could have been a cold, machine-made and impersonal system into

something cheerful, colourful, light and punctuated by significant open spaces and some brick work.

Change in the form and content of schools can also be propelled by a shift in educational practice. Student-centred education, developed in the 1960s and accompanied by such things as small group teaching, naturally led to open-plan layouts – a considerable change to the form and constructional system of late 19th and early 20th century schools.

The open-plan schools had the advantage of individualised instruction, team teaching, student grouping and a new managerial role for the school administrator. They emphasised that schools are only one part of a quality education programme and that the attitudes of teachers, administrators and students must be consistent with the open nature of the physical facilities. This change in both educational practice and technique of building led to the mutation in typology. The culmination was the landscaped open-plan school, called the California Senior Command Staff Duties (SCSD) school, which had wider implications⁶ for leading architects such as Norman Foster and led to the colourful, light and joyful early English high-technology buildings.⁷

Hampshire County Council in England built on this achievement and produced a substantial number of open-plan high technology schools and using these achievements as a basis, diversified their efforts to produce many experimental schools.⁸

The interesting point here is that they did not go exclusively for system building. There might be a lesson here for us.

To conclude, the profession and the powers that be should recognise that this Mamelodi school energetically interrogates the conventional ways of building schools. School buildings need re-inventing on each new occasion, particularly given current developments in education which are shifting away from the traditional approach to one more targeted at the individual.

END NOTES

¹Herzberger, H. *The Schools of Hertzberger*. Hertzberger, H and De Swaan, A, Amsterdam: 2009.

²Blundell-Jones, Peter. 'Hans Scharoun and Urban Structure' ARQ: Vol 1 Autumn 1995. Mebes, F. Edited by Blundell-Jones, P.

³One example of humanitarian practice is that of Paul Mikula. See *Architecture SA*, March/June 2005, pp 12 – 17.

⁴For other examples of work from Jooste's practice, see *Architecture SA*, July/August, pp 78-81.

⁵This is also true of educational practices, and thoughtful social philosophers – such as Goodman, Paul. *Gestalt Therapy: Excitement and Growth in the Human Personality*. With Frederick, S; Hefferline, P & R. Vol II, 'Novelty, Excitement and Growth'. Julian Press, New York: 1958; Illich, I. *De-Schooling Society*. Marion Boyars Publishers Ltd, London: 2000; Freire, P. *Pedagogy of the Oppressed*. Continuum, New York: 2007; and Postman, N. *Teaching as a Subversive Activity*. Random House, London: 2000 – always voiced their concerns about this.

⁶Norman Foster openly acknowledged the influence of the California SCSD system on the subsequent developments of his version of high-technology buildings. See his 'Approach to Architecture', *RIBA Journal*, April 1970, pp 84-88.

⁷See MacDonald, A. *Engineer's Contribution to Architecture*. Thomas Telford Publishing Publication, London: 2000.

⁸The interesting point here is that when any changes are introduced solely for technical reasons, for instance in the case of what was called CLASP (The Consortium of Local Authorities Special Programme) to deal with the problem of the building of schools on lands of mining subsidence, the results did not endure and neither did they spawn any substantial further developments.



- 4 Sections.
- 5 Assembly area and classroom blocks.
- 6 Covered walkway with verandah seating outside each classroom.
- 7 A typical classroom.
- 8 Children in the courtyard.