The coexistence of the 'third' and 'first' world in South African architecture: the inclusion of the 'underdeveloped' in 'developed' technologies in the age of globalisation

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The architecture of so-called 'first' and the 'third' world countries reflects their different characteristics and dynamics: their economical, political, social and cultural dispensations as well as their patterns of collection, production, and consumption. Yet do 'developed' and 'underdeveloped' technologies have to conflict? The input of information and knowledge should not be imposed but shared. Where the regional culture and resources are taken into account, the resultant architecture is rooted and functionally relevant. The promotion of well-executed South African architecture with so-called 'underdeveloped' elements in 'developed' technologies can make a positive contribution to global development and community upliftment.

Key words: regionalism, globalisation, technology.

This study was inspired by stunning examples of the coexistence of the so-called 'third' and the 'first' world in South African architecture. While travelling extensively, experiencing local architecture, I found my assumptions tested and was able to observe both the positive and negative impact of the advent of globalisation. It was necessary to review critical studies on global processes affecting architecture in order to approach the interface thoughtfully and proactively, rather than passively, so risking unsuccessful implementation.

The inclusion of the 'underdeveloped' in 'developed' technologies can often be seen in South African architecture. They power of this combination could be promoted to enrich the way we view our global coexistence and cooperation, as being between partners, rather than winners and losers. In stead of the imposing of foreign polices and technologies on local practice processes of mutual inspiration and reliance could evolve, pooling different skills and knowledge. Yet good ideas and intentions can be dismissed if they are poorly or thoughtlessly implemented; disregarded people will not be themselves with those who disregard them.

In order to discuss the coexistence of the 'developed' and 'underdeveloped' technologies in South African architecture in the broader context of long-term values and global trends, it is necessary to look into the factors shaping our identity and those of specific regions, as well as of those who are regarded as the 'others'. Then we need to investigate on what bases 'we' and 'they' cooperate and with which outcomes.

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This paper therefore first reviews, the multiplicity of regionalisms, constructively rather than sentimentally. The dynamics of power and powerlessness is related to 'developed' and 'underdeveloped' countries. Aspects of regional architecture, the interpretation of regionalism and its patterns, are discussed. Secondly, the regional concept is followed by the global concept, and I have tried to convey the gist of globalisation, in terms of both its benefits and disadvantages. Thirdly, the perspectives of tradition, on the one hand, and progress on the other, have been brought into play in current processes and the input of information and different types of knowledge have been validated.

These three parts have formed the foundation for the context of architectural investigation. Architecture is viewed as the material expression of different cultures whose coexistence is encouraged. Readers may well be overwhelmed by the quality of selected South African designs used to illustrate the concerns of this article. The recapitulation proposes ways in which the South African architectural experiences of including the 'underdeveloped' in 'developed' technologies can make a positive contribution, both to a balanced global development and to the upliftment of local communities. Minorities should not be excluded because of their relative powerlessness and their standard of living, since they have developed their own identities and have different skills approaching design and development solutions. They can therefore enrich global standards and simultaneously promote regionalism.

**Regionalism, its interpretations, patterns and dynamics**

Regionalism is the combined interaction of climate, culture, technology and craft, plus myth. The reconciliation of a rich, formal and cultural preoccupation with the wealth of technical local knowledge and material is the application of creativity brought to rooted architecture (Hawkes 1996: 118). There are rooted and universal cultures. Sustaining any kind of authentic regionalism depends on our capacity to generate vital models of regional architecture and ideas while appropriating global influences at the level of culture and civilization (Frampton 1992: 315).

Where neither typologies of architectural and urban design, nor the right political conditions are present, the formulation of a creative cultural development becomes more difficult. The global megalopolis is patently antipathetic to a dense regional differentiation of culture. It reduces the environment to commodity. The relation of building technology to design is the fundamental problem of regional architecture.

In the past, regions reflected and served the limited constituencies in which they were grounded. A regionalism of *restriction* and regionalism of *liberation* are nothing new (Frampton 1992: 320). Restrictions can define the constraint, control, regulate and stipulate what to do and what not to do. Nevertheless, restrictions are necessary for growth. On the other hand, no-one can create, invent, or discover something really new just by following instructions. 'Liberated' regionalism is the manifestation of a region that is exceptionally in tune with emerging thoughts. It is regional because it has not yet emerged at any time or place. The creative power of this region has to be more than commonly established. It is necessary to build significant buildings to articulate this regionalism architecturally so that the expression may be sufficiently forceful to catch people's attention and provide a climate for developing certain designs. Only this manifestation has implications for the global architecture outside itself. Creative interpretations of regional issues and tasks can enforce *critical* regionalism. *Critical regionalism* would seem to offer vital architectural expression (Frampton 1996: 470-482).
These previously defined regionalisms could be cultivated by a regionalism of 'cooperation' and 'coexistence' of the so-called 'first' and 'third' world or of the 'developed' and the 'underdeveloped'. This combination could complement regional trends, illustrating lived reality 'Cooperative' regionalism is something that should be promoted in developing regions where the first and the third world converge.

Nowadays, when globalisation is reality, regionalism has to be self-consciously cultivated.

The phenomenon of globalisation - its benefits and disadvantages

Do the concepts of the regional and global have to be paradoxical because of the obvious antithesis? Ideas may be developed or received; intelligence, imaginations and creativity are necessary for processes. Regional cultures can influence global culture and simultaneously be manifestations of world culture.

The so-called 'first' and the 'third' world, the 'developed' and the 'underdeveloped' - how do they communicate and interact in the age of globalisation? The efficacy of design not embedded within regional culture, when quickening towards globalisation, has been faced down to social, economical and technical failure. It is necessary to answer to what extent, for example, global information on environmentally progressive buildings can be transferred across regions with mutual give-and-take or teach-and-learn.

The idea of regional identity may have to be redefined as the progress of globalisation spreads and stimulates farther a field. Some ideas have travelled successfully between regions, and samples of generic principles have become specific solutions after consultation and collaboration. It is worth remembering that human, social and cultural assumptions may limit technological advances and accomplishments. Using the specific case of the design of environmentally sound architecture, it is necessary to identify a number of issues from different perspectives. The regional culture plays a crucial role in the successful process of exchanging, adapting and implementing standards in the built environment. On the other hand, local needs and good standards need international cooperation in setting targets and increasing the exchange of environmental information and practices.

Despite the large stock of publication on globalisation, there is no single widely accepted definition of the phenomenon. The definitions range from those focused exclusively on economics to a broader summary as the global circulation of goods and services, as well as of information, ideas, culture and people. The promotion of the integration of societies around the world often clashes with questions of inequity.

The advocates of globalisation point to its three-fold beneficial impact, with positive implications for equity: the stimulation of trade and economic growth, the reduction of poverty without a rise in inequality, and its contribution to stability. These claims are supported by evidence. The drawbacks of globalisation, towards an outcome of global integration, on the other hand, are perceived as vicious, involving an increase in inequality and vulnerability. Curiously, this completely opposite outcome to that envisaged by advocates of globalisation is also supported by evidence. The opposing views raise a series of questions. Why and how does globalisation provoke such contradictory evaluations? Do they hold any validity? Is it possible to present any reasoned judgment on the merits or not of globalisation, and to cope with the phenomenon? Can we, for example, reduce misunderstanding on individual country cases by aggregating data across various regions of the developing world? (Dinallo 2005: pp xiv- xv).
A brief summary cannot capture the analysis and the richness of the observations. They provide a varied set of findings with respect to the impact of globalisation on the feasibility of egalitarian redistributive policies. The institutions and policies that survive the competitive selection process of global competition need not to be uniform across countries. Global specialisation may promote diversity and support distinct economic systems. Even where tendencies of homogenisation of developments are strong, there is little reason to expect that the result will be the same. If regions occasionally emulate those who are doing well by standard measures, the pressures of global competition are still likely to favour diverse ideas and creative approaches. Global competition can patronise egalitarian solutions (Bardhan 2006: 10-11) but the importance of tradition and progress plus the input of information and knowledge have to be comprehensible, and managed accurately in specific contexts.

**Tradition, progress and the input of information and knowledge**

Tradition is the way of living or doing things in a manner that is handed down from generation to generation. In the architectural field it is associated with designing and building in the manner of the ancestors. Such an approach can only be relevant and understandable if nothing has changed from the past and the present. Otherwise this implies that people must be living in isolation or that they have not developed a vital lifestyle. Such a state of isolation can exist when oppressors have frozen local aspirations and progress or where a society is far from the major trade routes (Almeida 2005: 127).

A non-vital lifestyle can mean limited activities within the society or an absence of communication with other societies. When progress appears to be bypassing most societies in the more remote rural areas, they are deprived of the benefits of present-day input, which could have ensured an improved quality of life, and their knowledge and experience, not being connected to the global stream, can easily disappear. Even when attempts are made to provide a record of such cultures, the documents are often chaotic and fuzzy. Problems with facts and interpretations pile up, and it is difficult to achieve viable results when the traditional architecture of a region has been neglected for far too long. The potential to learn from it has simple gone (Steyn 2003: 192).

Architecture is the most evident, substantial and touchable manifestation of life and culture. The most convincing architectural contribution is the physical building - more convincing than any model or documentation. Data from primary resources, credible arguments, bold syntheses and, finally, lively interdisciplinary and cross-cultural discourse, could secure the traditional and regional input in global strategies and outcomes.

Information is simply data that can be stored or distributed. By itself information does not provide any significant or deep understanding and limits the users who act upon it. Unlike information, knowledge is context-dependent. It is not easily transferable and is attached to a society. Knowledge can be 'explicit' (straightforward, shared between researchers and practitioners) or 'tacit' (understood, but not necessarily given, transferred in person-to-person contact, or in individual learning and experience). Know-how is central to architecture and construction. Such knowledge is provided largely through the experience of the diverse members of the design and building team. The distinction between information and knowledge must be clearly recognised in the cross-cultural transfer of both. Building information may be quickly transferred, with the re-interpretation of texts in foreign contexts via information and communication technologies. But the absorption of relocated and uprooted knowledge may slow down in response to a social and physical context, or quicken in response to an unforeseen disaster, or in face of the political and economic forces.
Tacit knowledge has been and continues to be transferred. In the past this moved slowly with migrating populations and became negotiated by changes in social, economic and political structures, and in response to differences in materials and climate. The benefits of interpersonal communication in terms of research and technological innovation tend to be localised regionally and linguistically. Permanent immigration or temporary exchanges of skilled people accelerate the integration of knowledge and its exchange (Lorch 2003: 2-4). But contradictory, the trend toward globalisation has significantly increased the potential for appreciable access to building-related information from almost any region. The result of this enhanced communication is often not cultural focus, but a deepening obscurity and an increasing failure of architecture to perform as intended.

Contemporary South African architecture as an expression of culture- the 'underdeveloped' and 'developed' technologies

Culture consists of the ideas, tradition, knowledge, technology, intellect and art that are produced or shared by a particular community. It is important to understand the regional culture in order to create architecture that has roots, functions well and is long-lasting.

The 'underdeveloped' in the 'developed' - architectural applications part 1

![Figure 1](image1.png)  Environmental design and indigenous plants enforcing regional character, ICC, CT.

![Figure 2](image2.png)  Traditional design well rooted into regional and environmental issues, ostrich farm, CT.

![Figure 3a](image3a.png)  A community based project, powerful demonstration of local expression, KZN.

![Figure 3b](image3b.png)  Local materials and skills dominate the 'developed' technology, KZN.
The 'underdeveloped' in the 'developed' - architectural applications part 2
Developed technology and local materials and technology, public toilets, Knysna.

Stainless steel details and screen walls made of local materials, public toilets, Knysna.

Screens made using available materials, skills and labour, hotel in Maropeng.

Details of screens made of available materials, hotel in Maropeng.

Local materials fixed to the industrial fence, coexistence of 2 worlds, Groenkloof, Pretoria.

Branches of local trees fixed to the industrial net, coexistence of 2 worlds, CT.

Details of screens made of local materials by local labour, Cape Point.

Details of a decorative ceiling and lighting, Maropeng, Gauteng.
The 'underdeveloped' in the 'developed' - functional and public art

Figure 13a
Developed technology and local ideas, reinterpretation of screens, Constitution Hill.

Figure 13b
Environmental control and reinterpretation of the screen, Constitution Hill, Jnb.

Figure 14a
Use of industrial and ordinary timber, different interpretation, Constitution Hill.

Figure 14b
Metal frame (developed) and branches (underdeveloped), Constitution Hill.

Figure 15
Reuse of materials and reinterpretation of original function, Cape Town.

Figure 16
Large sections of local trees converted into table (and chairs), Cape Town.

Figure 17
Local ceramics pots, small projected elements form characteristic texture, KZN.

Figure 18
Reinterpretation of vernacular expression by an artist Jeremy Wafer.
Regional culture embraces the values, significance and understanding of climate and varied resources. Bridging past and present living allows for solutions and accomplishments. Architecture is the material expression of the cultures that build it. The buildings and settlements exemplify what is valued and what is not. They illustrate patterns of collection, production, and consumption, and forms of economical, political, social and cultural behaviour. Architecture is a statement not just of the patterns of privilege and power, but of established relationships between humans, as well as of their relationships with the environment (flora, fauna, materials and other resources). Location has thus defined the nature of architecture. The environment provides means of expression to the people who call it home. And those people have, over time, responded to what was given to them in different ways. Arguments are raised about the appropriateness of exchanging information, technologies and design standards, about how architecture should be designed and built or settlements laid out. When developing the arguments of understanding and responding to a context in order to protect regional identities and culture, we are faced with the issue of applying information and technology transferred from one region to another. These questions are especially pertinent when the move is from a more 'developed' country to a less 'developed' one.

South African contemporary architecture, as illustrated by its variety and character, seems to have really benefited from its cross-cultural diversity and the complexity of its context. Contextual issues define bases of regional architecture. Environmental design and indigenous plants can shape regional character in contemporary design (see Fig. 1) and extend the traditional design, well rooted into climate control issues (Fig.2).
Many buildings and public places function not only as symbolic landmarks, but in many cases as meeting places for particular users and as bases for community organization. They appear to reflect the legacy of different lifestyles, cultures and skills. Regional communities can adapt developed technologies and create distinctive regional statement. Figures 3 a and 3b illustrate how local materials and skills govern the 'developed' technology in Kwa-Zulu Natal. Concrete blocks, representing 'developed' technology, have been used to build the traditional Zulu oval forms. The gum poles representing the 'undeveloped' have been applied to columns, the tower, signage and information. This community-based project is a powerful demonstration of Kwa-Zulu Natal cultural expression. It seems the 'undeveloped' can support and inspire 'developed' technologies. Figures 4a and 4b exemplify the spirit of a truly unique place and harmonious synthesis. The buildings show the creative reinterpretation of a vernacular technology and recognizable identity where the 'undeveloped' technology has been flourishing. The windows and doors represent the 'developed' technology. They introduce higher standards and are well integrated with the local technologies being the reinterpretation of existing materials. Then the reuse and recycling of materials also leaves room for inventive applications. Figure 5a shows the foundation of light structures made of tyres and concrete fill. This is one more idea in a variety of application of tyres, as in playgrounds and screens, which are very popular in South Africa - see Figure 5b.

Another example from Port Elizabeth, combining different skills manifests identity and introduces new solutions, resulting in specific architectural expressions being inspired by specific local context. The architect integrated the dramatic expression of the past and contemporary technology and detailing. It is evident that, despite strong globalisation trends, regional identities have not disappeared, and the 'first' and 'third' worlds coexist, shaping an architecture exposing its own identity. The figures 6a, 6b, 6c and 6d illustrate architecture incorporating the 'developed' and 'undeveloped' elements in selected samples and details of the Red Location Museum in Port Elizabeth. The concrete column representing 'developed' technology and the gum pole columns, representing 'undeveloped' technology, coexist. The industrial timber and gum poles represent two worlds: present reality and a metaphor of the rough past. Steel joints act as the 'developed' technology between the rough 'undeveloped' elements.

The understanding of the specific context and function can stimulate our innovation. It is worth investigating and building upon. Figures 7a and 7b of the public toilets in Knysna show the expensive stainless steel details and cheap light screen walls. What has to be easily to maintainable and long-lasting for many users is worth paying for, and application of the 'developed' technologies is fully justified. What does not have to be so enduring can be made of easily available local materials. Safety and ventilation issues add to the design concept of this architectural example.

If the traditional, completely integrated system is more powerful than the imported corporate one, which has little chance of success in such a place, we have to incorporate what is already there. The design should not seek to impose a foreign and pre-established system - whether it is an architectural style or an architectural language. The way in which materials are applied should be fully integrated with the functioning existing order and the values associated with it. If the global impetus is to turn what is there into something else and transform it into the 'nobler' version, this has to be done without alienating the local community, remaining completely connected, fully part of the functioning organism - but a distinguishing part of it (Makin 2007: 27). Figures 8, 9, 10, 11, 12, 13 and 14 show the details of screens, fences, the decorative ceiling and lighting design of typical industrial parts and ordinary local materials converted into special items. The 'developed' technologies are a canvas for the use of powerful
'underdeveloped' technology, which has been applied thoughtfully and handled vigorously and creatively in many places in South Africa recently.

The colourful South African diversity and the vibrancy of its architecture illustrate its cross-cultural force. Public spaces are designed to create different flows to 'market' themselves. Architectural space is unique when it has its own energy because of its conception, its development and its looks. Figures 15, 16, 17, 18, 19, 20 and 21 illustrate the functional and public art and artistic reinterpretation of materials and their original functions. Their details show the innovation and creativity expressed, the regional vibe as well as fun and humour. Their character has usually expanded over a specific time span and from the contributions of various individuals and society. Spaces and buildings document the cultural value composed by different elements from changing flavours. Layer upon layer and experience upon experience have been accumulated, and they in turn influence the future.

There is a conflict between regionally appropriate environmental building processes and an increasingly global technical and economic culture. In order to improve the environmental performance of architecture, it is necessary to create a greater awareness of environmental issues. The discussion is no longer whether there is an environmental crisis, but rather how can we now integrate fragmented, contradictory and competing interests and values. There is an increasing demand for higher performance standards in the built environment and for the willingness to deliver such architecture, which in turn requires new, innovative environmental design. Within this context, the extent to which clients, users and designers understand the need, and want to implement policies enforcing sustainable design futures, is extremely important. Architects and designers, through the power of their creativity, help communities around the world embrace change. This is happening in the new South Africa. Today more and more South Africans live in cities but the environment they inhabit is very different from what we think of as a traditional European townscape. It is worth exploring the role of culture, identity and expression in African architecture, by looking at the complex interplay between climate, context and technology as well as social and environmental processes.

The fabric of architecture is not an art of imposing, but of discerning potentials and bringing them into play. Rather than being constrained, it involves expanded creativity, helping the new to be born and healing what does not work. Many people acknowledge the limits of the human intellect and stress the importance of instinct and intuition. Guided by instinct and intuition rather than by intellect alone, architectural design requires a harmony between head and hand, experience and memory. In stead of the unthinking application of global tendencies, the individual application should grow naturally from the design task, well rooted in the region and its resources.

South African spaces and places remind and teach us about the potential of creative application of architectural materials and technologies representing the 'developed' and 'underdeveloped'. The most profoundly rich and dense synthesis of ideas and concerns form what is timeless in architecture. This is the mix of simplicity and sophistication of expression, as may be found in the convergence of the so-called 'first' and the 'third' world.

Recapitulation

Globalisation has not replaced social structures. In itself it is neither good nor bad. Its consequences are largely the results of human decisions, which can be debated and changed. The generic imposition of an impersonal globalisation should be replaced by a considered respect for revealed identity. In order to succeed, designers have to reinforce the need for a regional,
culturally informed architecture and environment. This requires avoiding mere imitation of the vernacular and historical pastiche, and creatively engaging with the living culture of a region and of the world. The contemporary lifestyle and expectations in most of the developed world are unsustainable and unrealistic. Expectations have been raised to inappropriate levels and are giving rise to questions about the distinction between deep cultural values and impermanent lifestyles. The need for positive intervention and change at a social and cultural level in many regions is clearly a critical concern in the global movement.

Sharply varying interpretations placed on exchanging information and technologies may lead to the designing of environmentally-‘progressive’ architecture between cultures. The ‘developed’ and ‘undeveloped’ can cooperate creatively. Cross-cultural transfer is possible, but can be problematic when we do not know why and how to tackle it. The selected sample of architectural interventions illustrate, however, that such transfer is worth trying. It can help us to integrate better and happier humans and enrich societies culturally. Global buildings, regionally grounded yet, based on international design standards, are present in South Africa and in many places around the world.

Globalisation is not a choice - it happens. Contemporary globalisation has had some important positive consequences with respect to cultural regeneration, the decentralisation of egalitarian power, economic productivity and the availability of a range of materials, products, technologies and ideas. There are many negative consequences too, like increased environmental degradation and various examples of cultural violence - and, of course poverty, worsened working conditions and inequalities. The question is how we individually address our concerns in many different regions so as to make us stronger and allow us to demonstrate an enhanced identity.

Nothing imitative is equal to that which is imitated. Instead of imitating, we should search for the principles that made them original. There is a need and demand for architects who tackle today's requirements and problems with today’s solutions and resources. Well-executed regional architecture can make a positive contribution to global development and the upliftment of communities.

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Polish/South African architect has professional experience as a designer and supervisor of two churches, monastery and chapel, holiday resorts and habitats as well as public interiors. She has received awards for architectural competitions and her fine art works have been exhibited internationally. Barbara published internationally and presented papers at conferences widely in Europe, America, Australia and Africa. Her research interests are concerned with environmental architecture, cultural diversity, public art and architectural ceramics as well as architectural education. Barbara has been teaching architecture in Poland and South Africa. She has also acted as the external examiner. She has been appointed to the RIBA, CAA and SACAP accreditation panels. She is an expert in architectural design, theory and history.

