



SYMPOSIUM 2016

architectural education @ different scales

3-4 SEPTEMBER 2016

UNIVERSITY OF THE
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JOHANNESBURG



SCHOOL
OF ARCHITECTURE
& PLANNING

ACKNOWLEDGEMENT

On the occasion of Professor Paul Kotze's retirement from the Wits School of Architecture and Planning, his colleagues gratefully acknowledge his dedication to providing and upholding inspiration, not only to his own students and colleagues, but also to the greater architectural community. As the founder of the Sophia Gray Memorial Lecture and Exhibition series at the University of the Free State, the organiser of the Carl & Emily Fuchs Prestige Competition in Architecture, a SAIA National Awards of Excellence and Merit adjudication panel member and the person currently responsible for this journal, he disseminates excellence in many different forms.

Thank you Paul!



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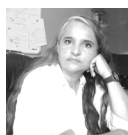
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ARCHITECTURAL EDUCATION @ DIFFERENT SCALES

Edited proceedings of the Architectural Education Forum Symposium held at the University of the Witwatersrand, 3–4 September 2016.

ARIANE JANSE VAN RENSBURG, ASSOCIATE PROFESSOR AND UNDERGRADUATE DIRECTOR OF THE ARCHITECTURE PROGRAMME, SCHOOL OF ARCHITECTURE AND PLANNING, UNIVERSITY OF THE WITWATERSRAND

An unprecedented interest in research and collegial discussion on architectural education resulted in the founding of the Architectural Education Forum (AEF) in 2014, after a national architectural education symposium at the University of the Witwatersrand (Wits) in January of that year¹. At the end of August 2016, Wits hosted the SAIA AZA event, which generously supported the 2016 AEF symposium. The symposium was also sponsored by a Wits Teaching Development Grant from the Department of Higher Education.

THEME AND SUB-THEMES

The theme was 'Architectural Education at different scales', subdivided into three sub-themes presented by the keynote speakers.

The keynote speakers were Prof. Baerbel Mueller, from the Institute of Architecture (IoA) at the University of Applied Arts in Vienna, whose presentation also formed part of the AZA proceedings under the banner of Community @ 1: Many, followed by Prof. David Andrew from the Wits School of the Arts addressing Access @ 1:1, and Prof. Mark DeKay from the University of Tennessee School of Architecture who introduced Theory @ all scales.

Prof. DeKay put forward a provocative model for "Exploring New Terrains, the Next Design School" in which he explored the paradigms of learning to design for zero carbon emissions, constructing an ecology of shared design knowledge; teaching, valuing and developing design methods that can be disseminated to others and cultivating a collaborative work culture.

Prof. Mueller's presentation "In-between on all levels" addressed alternative approaches to architectural education, research, and practice, looking at community projects conducted with students in various African

contexts. She interrogated the potential and challenges of truly contextual, transcultural, and transdisciplinary work methods, which raise topical challenges such as how to deeply read a place and situation; how to enter a space which is not yours; and how to relate, break stereotypes and surprise.

Prof Andrew explored transformational issues in education in "Recognising student resources: Multimodality and curriculum transformation", in which he considered how the resources that students bring to processes of teaching and learning might be recognised, validated and understood as primary generators of curriculum transformation, drawing on the experiences of the Wits Multiliteracies group over time.

The workshops were equally diverse. Prof. Lone Poulsen presented on OpenArchitecture², CPUT's online architectural course, which allows students to work in practices and visit the university for occasional blocks of face-to-face interaction with lecturers.

Christos Daskalakis from Wits led participants in a practical movement workshop as an alternative teaching tool for spatial exploration. Lecturers who were brave enough to shed their inhibitions found themselves surprisingly energised and refreshed for the remainder of the symposium.

Dr. Ariane Janse van Rensburg took participants through the model she developed for supportive first year teaching in design, which proactively addresses the diverse challenges that first year students face by introducing new skills and concepts in social contexts before students are required to use them in assignments. ■

¹<http://www.comarchitect.org/wits-hosts-architectural-education-symposium-founds-forum/>
²<http://www.openarchitecture.co.za>



1: A scene from Christos Daskalakis' movement workshop.

EXPLORING NEW TERRAINS

The 'Next Design School' – exploring a new approach to transform design education.

BY: PROFESSOR MARK DEKAY, RA, UNIVERSITY OF TENNESSEE SCHOOL OF ARCHITECTURE

Organisations evolve and develop, or they wither and die. Design schools are also organisations that need to be led into their future. By the 'next design school', I mean both the next level of development for architectural schools and just maybe, the next major viable paradigm for design education.

What could the next design school embody? We've had 350 years of education influenced by the mostly pre-modern Beaux-Arts, 100 years of the modern Bauhaus influence, and 35 years of postmodernism in design education, with both light and dark sides. Design education's future is calling.

WHERE NO DESIGN SCHOOL HAS GONE BEFORE

Here are my propositions in four different knowledge domains. This is one of the frameworks used in my book *Integral Sustainable Design: transformative perspectives*¹. It is a framework that I use to study any issue because it helps me touch all the bases. The illustration in figure 1 helps to explain these four perspectives – simply the inside and the outside of the individual and the collective^{2,3}.

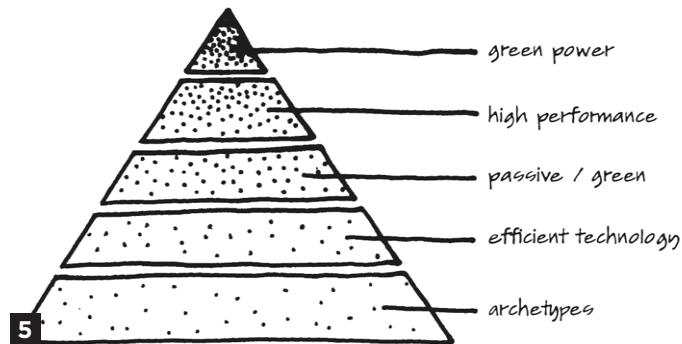
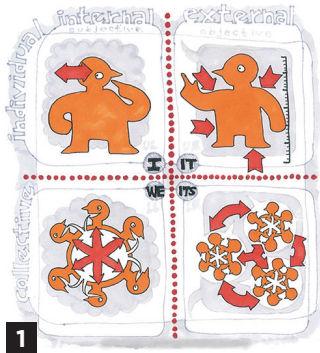
There are two primary distinctions yielding the four perspectives. Everything on the right is objective – you can see it; it has form and location. Everything on the left is subjective – you cannot see it at all; to know your experiences, I have to ask you. The upper part is individual and the lower part is collective, or singular and plural if you prefer.

- The upper right quadrant is the *Terrain of Behaviours*. It is objective and is defined by what we can measure and weigh in the empirical world. In design schools, it is the perspective of engineering and building science.
- The lower right quadrant is the *Terrain of Systems*, which is inter-objective, and can be urban systems, ecological systems, or social systems. In design, this is both the study of contexts and of spatial organisations, along with the complex processes that interact with space.
- The upper left perspective is the *Terrain of Experiences*, the subjective interiors of individual humans, with their feelings and intentions. In design, this is the domain of aesthetics, phenomenology, and the designer's intentions.
- The lower left quadrant is the *Terrain of Cultures*, an inter-subjective perspective in which we search for meaning. In design, this is most often the perspective of history, theory and the narrative explaining of ideas. It is the domain of interpretations.

EXPLORING THE TERRAIN OF BEHAVIOURS

This is the perspective of how things work. It is where designers shape form to maximise performance. In this terrain, I believe that: *'The next school will explore solving the climate crisis by design.'*

The image in figure 2 is shot from the orbiting International Space Station. It catches the sunrise across the thin film of our atmosphere over the even thinner



1: The four quadrants

2: Sunrise from space

3: A receding glacier in Glacier National Park

4: A nearly dry well in Gokwe, Zimbabwe, 2015

5: Hierarchy of strategies for net-zero building design

green film of life on the surface⁴. It gives the perspective that the atmosphere we think of as immense is actually quite fragile.

Climate change, I propose, is *the* defining performance issue of our time. In a recent *Design Intelligence* magazine survey, 73% of design college deans in the USA say that climate change is the most pressing issue facing the profession.

IT IS HAPPENING

The energy trapped by man-made global warming pollution is now “equivalent to exploding 400 000 Hiroshima atomic bombs every day, 365 days a year”, according to James Hanson, former director of NASA’s Goddard Institute for Space Studies. That’s a lot of heat!

All this heat is having a huge effect on the things we love. The US Geological Survey’s Repeat Photography Project has dozens of photos like figure 3 where historic shots are reproduced and compared with the glaciers currently in the Glacier National Park⁵. Scientists used the large boulder as a baseline to measure the retreat of Grinnell Glacier’s terminus. The glacier’s terminus is no longer visible from this point. A glacier is defined as at least 25 acres (about 10 hectares). In 1850, an estimated 150 glaciers were present in the park, but now less than 25 exist.

Figure 4 shows a dry well in Zimbabwe in 2015, but this is the case across much of the African continent, especially southern Africa⁶. The worst regional drought in nearly a decade caused crop failures and affected harvests in many countries and is particularly severe in Zimbabwe.

There is some good news. The USA and many other countries have been moving very powerfully toward renewables. Of all the energy production expansion in 2015, two-thirds was solar and wind, almost nothing (.01%) from coal – good news for the climate.

EDUCATIONAL OPPORTUNITY

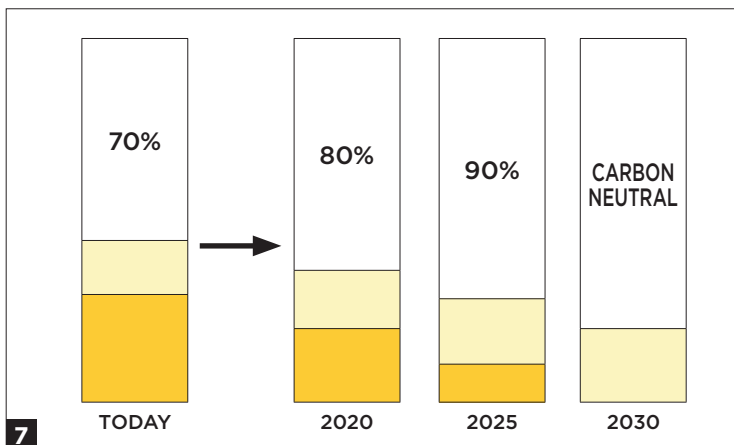
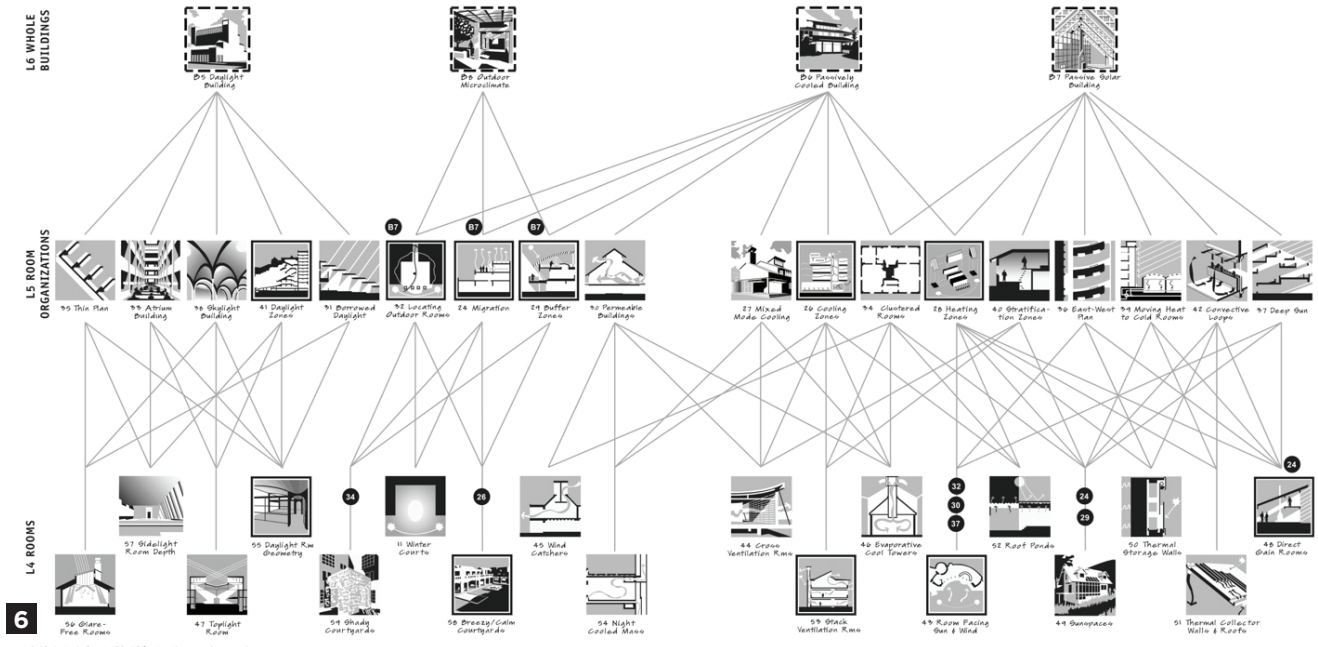
Although buildings are a huge cause of climate change because of the fossil fuels they use, design education has been slow to respond to the climate crisis. The 2010 Imperative, a 2006 educational initiative in the USA from the Architecture 2030 organisation, called for three commitments:

- All design studios would require *reducing or eliminating the need for fossil fuel*.
- Schools would achieve *ecological literacy across all aspects* of the curriculum.
- The design school campus would be renovated to achieve a *carbon-neutral footprint* as a working example for students.

A few schools signed on, but they were all too timid and the effort failed. Unlike the profession, the academy is still debating the problem, or worse ignoring it.

HIERARCHY OF STRATEGIES

How we get to a school like the one envisioned in the 2010 Imperative is both developmental in education *and* hierarchical in a design process. Figure 5 is from the newest edition of my book, *Sun, Wind & Light: architectural design strategies*⁷. It suggests that we can solve technical design problems at the lowest levels first. ➤



6: Design strategy map (excerpt)

7: The 2030 Targets for buildings

☐ Fossil Fuel Energy Reduction
☐ Renewable
☐ Fossil Fuel Energy Consumption

1. *The Level of Archetypes* is the most fundamental and includes traditional and historical wisdom about design. I call this the level of ‘embedded practices’, because it is knowledge built into the cultures of various places about how to build to fit nature and society. We are talking about the domain of technology here, but that includes local materials, construction, and formal space-making solutions to climate.
2. *The Level of Efficiency* is the level of modern ‘building science’. Ideally, it builds on the knowledge of traditional archetypes, using what works, but transcends it by adding modern perspectives on energy flows, access to tools and data, and structural efficiency, etc.
3. *The Level of Passive Design* transcends the linear thought of classical building science by making buildings that fit the rhythms of nature, using the sun for heat, the wind and earth for cooling, and the sky

for lighting. I refer to this level as designing for ‘cyclic analogues’. It is postmodern technical thought. However, to make use of the weak and distributed forces of nature, one first has to have an appropriate and very efficient building, which is handled in the first two levels.

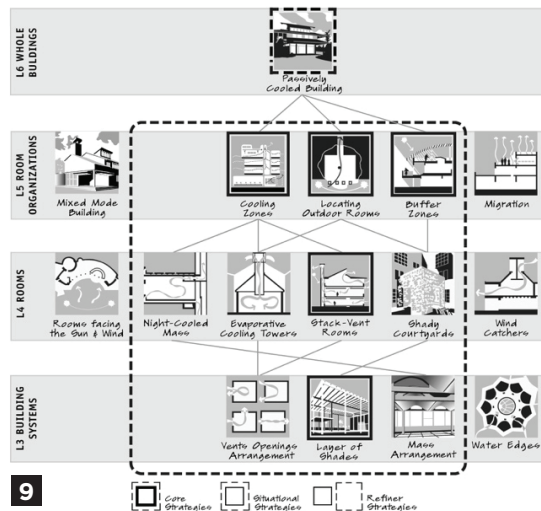
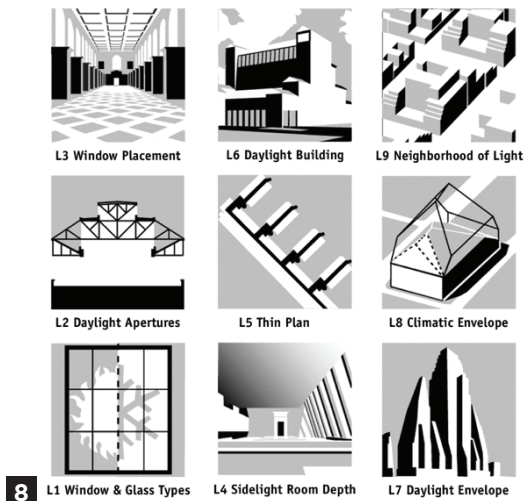
4. *The Level of High-Performance* integrates active and passive systems in smart buildings, whether controlled manually or by automation. This allows for responsive structures that adapt to changing conditions. It makes no sense to put smart high-tech systems in dumb buildings; you can’t skip the lower levels.
5. *The Level of Green Power* only makes sense when the rest is taken care of; it is not a level in the sense of the others. It could provide power to any building, but not intelligently. If your building is facing the wrong way, or if it is so thick that it needs electric lights all the time, or so overglazed that it overheats too much, or if it uses incandescent lights, then you have no business spending money on PVs to run it.

The point is that learning and applying technical thought is developmental. It has a vector.

CREATING A TARGET

For each terrain, I propose a topic, and for each topic, an action.

Figure 7 shows the 2030 Targets from the Architecture 2030 group, with all new buildings and major renovations dramatically reducing fossil fuel operational energy in stages and moving toward carbon-neutral performance by 2030, that is, operating without any fossil fuels at all⁸. Design education needs to set a target where: *‘In the next school every student will graduate with the requisite skills and knowledge to design a carbon-neutral and net-zero energy building’*.



CONFRONTING OUR CARBON-BASED ENERGY ADDICTION IS BOTH A GREAT CHALLENGE AND A GREAT OPPORTUNITY

Those who can will lead the profession. Those who cannot will become irrelevant. In California, all new housing will be net-zero energy by 2020. President Bush, the junior, signed the 2030 Targets into law for federal buildings and President Obama later accelerated the timeline by ten years. Confronting our carbon-based energy addiction is both a great challenge and a great opportunity. Solving the climate crisis by design is a vast and unexplored terrain for education. Yet, despite how many deans say it is the number one issue, *no school has actually claimed this territory*.

TERRAIN OF SYSTEMS

The terrain of systems is the perspective where we look for fitness to contexts, where we see that everything is both a whole and a part. In this terrain, designers use various forms of systems thinking. In this terrain, I believe that: *‘The next school will construct an ecology of shared design knowledge’*.

When we work in collaborative interdisciplinary teams, we need to make our knowledge and working methods transparent to others. Some scholars and architects have collaborated with others over time to build an understanding of the built environment in ways that can be shared with others. One of the early examples was Christopher Alexander and his colleagues who generated the book, *A Pattern Language: towns, buildings, construction*, at Berkeley. But so far as I know, no school has tried to take the minds of its 300 or 400 people and make their work add up to something larger.

A KNOWLEDGE ECOLOGY

In the third edition of *Sun, Wind & Light*, I’ve begun building a system of shared knowledge about climatic

design. In figure 6, each icon represents a ‘design strategy’ for sustainable design from *Sun, Wind & Light*. These are then combined in a design strategy map⁹. This shows the nested hierarchical relationships across nine levels of scale and complexity – from neighbourhoods to materials (only a few are shown in this excerpt). The lines represent certain relationships among the strategies.

There are three levels of complexity at each of the scales – ‘Building Parts’, ‘Buildings’, and ‘Neighbourhoods’. For architecture, these levels are nested and have increasing scale. Strategies at higher levels help to organise strategies at lower levels and those at lower levels help build strategies at higher levels. So, again we have the idea of levels of complexity and development having directionality.

Figure 8 shows one example from *Sun, Wind & Light*, showing some of the many strategies for daylighting. This is not just a theoretical construct. If you pull out any of the lower levels, the daylight building will simply not work. Each level of design idea, linked to the next, is necessary.

In this mapping there seems to be families of related strategies – ‘strategy bundles’ – that can be used to solve a common or recurring problem; figure 9 shows one example.

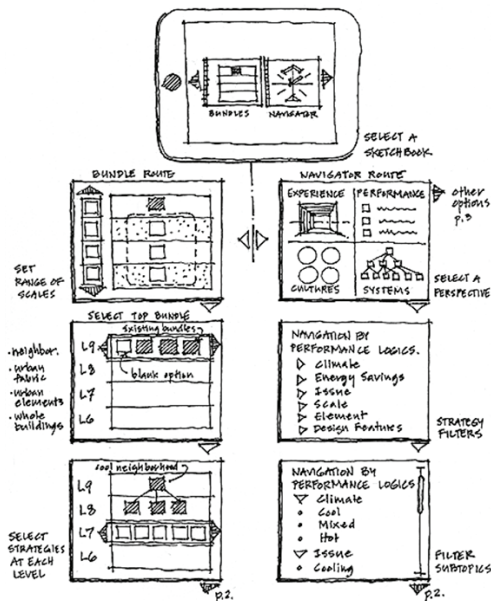
LEVELS IN THE SYSTEMS TERRAIN

We can think about systems in different ways that are more or less complex¹⁰. Each level of complexity has value to contribute and more complex levels can build on the less complex. Each has its strengths and limitations. In order of increasing complexity, we can think of systems as:

- Level 1 *Traditional Systems* are *tacit*, embedded, and employ workable local, ethnocentric knowledge. ➤

8: Daylighting strategies at nine levels of complexity

9: Strategy bundle for passively cooled building



10

10: Design strategies app concept storyboard

11: Four contemporary structures in design

11

The four contemporary structures in design		
Worldview		Design structures
Level 4	Integral >	Transforming Networking
Level 3	Postmodern >	Pluralistic Practices
Level 2	Modern >	Independent Professionalism
Level 1	Traditional >	Guild Traditions

- Level 2 *Modern Systems* are logical, linear, and see systems as parts in a machine.
- Level 3 *Postmodern Systems* are complex; they place everything into a context and link parts together in multiple cycles.
- Level 4 *At the Integral Level*, systems are living. They are multilevelled, nested, networked and ecological. Design education mostly treats these various levels with discomfort. Thinking at each increasing level of complexity requires greater and greater cognitive development. Most students entering US schools of design have the ability to think at level 2 (logical systems); after four or five years, they leave having moved up to level 3 (complex systems). *'The next school will teach, value and develop design methods for each level.'*

STRATEGIES AT HIGHER LEVELS HELP TO ORGANISE STRATEGIES AT LOWER LEVELS AND THOSE AT LOWER LEVELS HELP BUILD STRATEGIES AT HIGHER LEVELS

CONNECTING KNOWLEDGE PRODUCTS

Design schools constantly reinvent the wheel, exploring the same well-known territories over and over. But, in the profession, large firms have in-house researchers seeking to capture the knowledge generated on each project and share it throughout the firm's network.

Figure 10 shows one of several storyboards for a grant request to support a software application (app) for combining the knowledge structures of my two books, *Integral Sustainable Design* and *Sun Wind & Light*. It is one way to connect academic and professional knowledge products.

What if African schools of architecture created an open source 'design knowledge app' that was cheap or free to all students and architects? What if the learning communities worked collectively on mapping and filling in design knowledge around key questions? What if faculty scholarship, student theses, and the work of design studios was connected together, organised and made accessible? The impact of your work could be made so much more powerful!

The knowledge ecology of design is a vast and unexplored territory for education. It is both a challenge and an opportunity for the next school – a place no design school has gone before.

THE TERRAIN OF CULTURES

The terrain of cultures is the perspective of the inter-subjective, of worldviews and shared meaning, of stories and myths, and collective values. In architecture it is the terrain of history, theory, and design ideas. It is the territory of 'us and we'. *'The next school will explore cultivating a collaborative work culture.'*

This is the most important of the four terrains, because innovation depends on the ways we interact and the purposes we share. And, this requires a different way of being together – one that manifests new social actions and results in creating the outcomes we say we want.

In a culture that facilitates collaborative genius, a greater level of collective excellence requires less fragmented days, because the contemplation of possibility is fed by focus. It needs a culture that rewards teamwork, rather than individual competition. Universities simply don't get the importance of that idea. In the practice world what counts for success is the collective completion of the best built project of which the firm is capable. Big projects, thorny questions, and the very practice of architecture require a culture of collaboration.

The future that's calling us asks us all for three things that Otto Scharmer outlines in his book, *Theory U*¹¹;

- An open mind – the capacity to suspend judgment and inquire
- An open heart – the capacity to take the perspective of the other and of the whole organisation
- An open will – the capacity to let go of old identities and let your authentic self emerge, and thus, the authentic future.

These ways of being are the gateways to accessing our deepest sources of inspiration and vision.

FOUR CONTEMPORARY STRUCTURES IN DESIGN

Collaboration with multiple voices has both value and problem. The problem is both in our cultures and in the discipline of architecture itself. The problem is that contemporary society has at least four simultaneous cultures in differing proportions; and these cultures have different values and language, essentially, they are contemporaneous worldviews. Each also has an expression in architecture, both historically and in the present day¹². The lower three terms from figure 11 – traditional, modern and postmodern – are familiar to designers.

The next school honours timeless truths and emergent knowledge. Imagine, for instance, two modes of working in brick – one using traditional techniques in beautiful ways, such as in the work of Colombian architect Rogelio Salmona, and another using computer scripting to optimise the masonry form. Yet each can be done in a way that honours the compressive nature of the material. *‘The next school distinguishes between the dignities and the disasters of each epoch of design’.*

We are in a time when we can see the value of each epoch and both the dignities and the disasters of each stage in cultural and architectural development. We can transcend and include the traditional, the modern and the postmodern in culture and in architectural thought. *‘The next school transcends the disasters of each epoch and includes its dignities in a more sophisticated, more integral formulation’.*

This is achieved through **Alignment**: In this terrain, the task is not a target or product, it is an alignment. An alignment is not an agreement; it is a choice to take a stand with others for an idea.

A great organisation requires four ways of being that are the foundation for an extraordinary organisation¹³. They are:

- *Authenticity* means to be and act consistent with who you hold yourself to be for yourself and others.
- *Being cause in the matter* means to take a stand for creating the future in spite of circumstances. We give up the right to blame others and to being a victim.
- *Being committed to something bigger than oneself* is the source of passion and joy. That ‘something’ is simply what inspires you and your organisation.
- *Integrity* is being whole and complete – keeping your word, and doing what you say you will do.

To solve the great design problems of our time, and get the results we want, we have to perform new work together. To do so, we have to *be together* in radically different ways.

THE TERRAIN OF SELF

The Terrain of the Self is the perspective of individual experiences and intentions. It is also the perspective with which we can understand human development. In this terrain, I believe that: *‘The next school will explore the interior human territory by developing the inner architect’.*

To develop the inner architect is to unfold the capacities and consciousness of the person capable of acts of architectural merit in today’s complex professional context. Without much of a plan, most students who complete college experience a profound change. They move in the direction of expanded care and concern to include people of other races, classes, genders and sexual orientations. Their worldview shifts to consider the validity of other points of view and other cultures. Students expand cognitively to handle greater complexity of design challenges. These are changes happening *inside* the young designer. Imagine if design education took this transformation on purposefully?

THE NEXT SCHOOL DISTINGUISHES BETWEEN THE DIGNITIES AND THE DISASTERS OF EACH EPOCH OF DESIGN

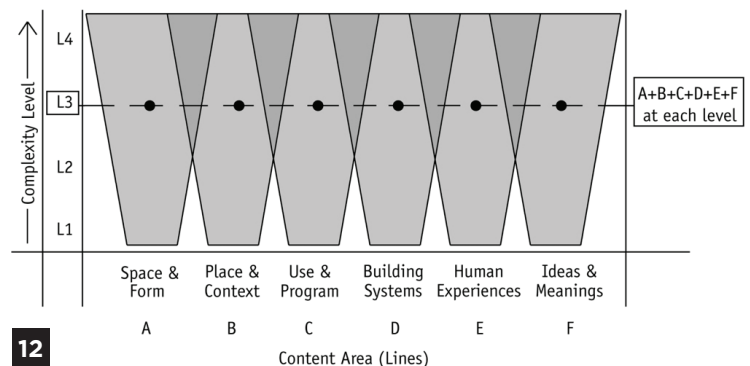
Just as culture moves through stages, adult human beings also develop. To educate designers and builders is to *develop* them: physically, mentally, artistically, and interpersonally. How we move through stages is based on our *practices*, those things we do over and over again, which then develop our awareness, for better or worse.

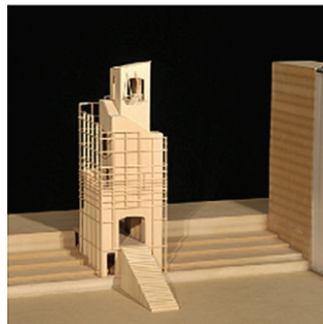
Architectural education is a process of developing the architect’s consciousness of complexity – from contexts to concepts to implementation – in one of two ways, in an *additive* way or in an *unfolding, developmental* way.

A DEVELOPMENTAL CURRICULUM

Instead of a conventional curriculum that begins with a singular focus on form, we can envision multiple content themes unfolding simultaneously, from fundamental to complex. Figure 12 shows six capacities that make up the bulk of an architectural education¹⁴. The developmental line of *Space and Form* awareness is informed by the parallel lines of capacities in *Context, Use, Technology, Experience and Ideas*. ➤

12: Model for a developmental curriculum





13

13: First semester work of beginners; starting with simple wholeness

Even a beginning curriculum can be constituted by multiple relationships among the fundamental levels of each line – and in this model, the same is true with every other level of learning. *‘In the next school, integration is fundamental; it goes all the way up and all the way down’.*

When we redesigned our beginning design programme, we imagined it was possible to learn to design buildings and to include all the things that, if left out, would make the design *not* a building. In our professional graduate programme for rank beginners, we challenged them with designing both gardens and houses in projects where tectonics are governed by materials and natural forces, space arises from its five fundamental progenitors (as in figure 12), and site and community design exist in contexts (figure 13). From the beginning, we had architects collaborating with landscape architects, designing places inhabited by people in a living landscape.

Our intention was to teach design by having students design buildings with all of the major themes present in real buildings and, over time, to increase their capacity in each of the six aptitudes, from fundamental to complex. Nine weeks later, the second semester project, an addition to MLTW’s Sea Ranch,

followed the same six ever-present themes in architecture, but at one step up in complexity:

- 1) Spatial order present in the precedent.
- 2) A coastal, rural site.
- 3) Timber construction logics.
- 4) Private and community uses.
- 5) Experiences along an intimacy gradient.
- 6) The ideas of vernacular expression and relationships to landscape.

Students collaborated in teams for cluster and courtyard design and also individually designed condo units. They built structural models of their designs and learned both ink drawing (in the elevations) and CAD (for the plans).

We also used *Sun Wind & Light*, which has 150 schematic design tools and strategies. Even at a first-year level, students were able to design with Level One concepts and solutions: buildings that were lighted by the sky, cooled by the wind, and heated by the sun. By employing this model of simultaneous learning along multiple lines at developmentally appropriate levels of complexity, we were able to achieve results in two semesters that the concurrent Bachelor of Architecture programme took six semesters to achieve.



14: Innovation in four terrains

DISCIPLINE

In the Terrain of Self, the action required for development is a *discipline*. *'The next school will need an architect's yoga of transformative practices.'*

Developing the inner architect is the prerequisite to outer architect actions. Yoga means, among other things, the *practice* of being aware of the self. A transformative practice is something we do repeatedly that creates developmental change. The more aspects of the self we simultaneously exercise, the greater the transformation potential.

The future of practice leadership requires high-performance designers who are not just smart, knowledgeable, and creatively skilled, but also personally and inter-personally skilled – that is, compassionate, emotionally intelligent, collaborative, and highly self-aware. Consciously developing the inner designer is a vast and unexplored terrain for education and a core characteristic of the next design school.

We have touched on exploring four integral terrains as seen in figure 14.

These terrains are not actually separate things, but interrelated and co-arising. While the future here might involve these propositions or other potential expressions, I believe that: *'The next school will be defined by distinctive innovations from the perspective of each of these fundamental terrains.'* In doing so, the next school will be the first integrally informed design school.

EMERGENCE

The next school emerges and unfolds in purposeful conversation with everyone involved. It is about investigating what gets presenced, what gets created when what you are collectively doing generates a 'new field'. Emergence in this context means this: That the most successful and adaptive responses to complex problems arise from a situation in which three conditions are present¹⁵:

- Diverse individuals in a system working around a shared goal.
- Acting with their own agency (meaning independence).
- Interacting with each other as much as possible.

Emergent solutions do not happen by dividing up a problem among the players. Instead, we have to look

for what emerges, all by itself, from focusing on what's trying to gel, and have a new context of meaning that encompasses wholeness.

Just like the design process, we have to give up the certainty of a known outcome and trust that a process-driven inquiry can lead somewhere we haven't been.

INTEGRAL ACTIONS

The next design school is created not in theory or discussions alone, but in actions. I've offered you four representative collective actions, one from each terrain:

- *Solving the climate crisis by design* requires that we educate every student to be able to design carbon-neutral buildings.
- *Constructing a shared knowledge ecology* integrates our collective research and design efforts to become interconnected and available. One way to do that is via an open-source digital design strategies app.
- *Cultivating a collaborative work culture* means including what works from the traditional, modern and postmodern by enacting the four foundational ways of being together:
 - + Acting with authenticity
 - + Being cause in the matter of your concerns
 - + Being committed to something bigger than yourself
 - + Practicing integrity
- *Developing the inner architect* requires a developmental curriculum founded in practices that accelerate students' development in consciousness along several lines of design intelligence.

You must align on collectively taking real actions as a learning community to move education developmentally to higher levels of complexity in each terrain. You are powerful together; use that collective power to make the biggest contribution you can.

Put all the diverse voices at the table and focus on what's actually on the table. Use that diversity to solve the most important social and environmental issues we face. What's on the table is the future of our built and natural world and all who will inhabit it. That's the next design school. ■

¹⁴DeKay, Mark. (2011). *Integral Sustainable Design: transformative perspectives*. London: Earthscan/Routledge.

¹⁵Image courtesy of Graphic Facilitation by Brandy Agerbeck, Loosetooth.com

¹⁶Four quadrant model originates with Ken Wilber and is outlined in numerous books, for example, see *A Theory of Everything: an integral vision of business, politics, science and spirituality*, Boston: Shambhala. (2001).

¹⁷Image courtesy of NASA, the US National Aeronautics and Space Administration.

¹⁸<https://www.usgs.gov/centers/norock/science/repeat-photography-project>

¹⁹© 2015 Reuters/Philimon Bulawayo

²⁰DeKay, Mark and G Z. Brown (2014). *Sun, Wind & Light: architectural design strategies*, 3rd edition. Hoboken, New Jersey: Wiley.

²¹http://architecture2030.org/2030_challenges/2030-challenge/

²²DeKay and Brown, *Sun, Wind & Light*

²³DeKay, *Integral Sustainable Design*

²⁴Scharmer, C Otto (2009). *Theory U: Leading from the Future as It Emerges, the Social Technology of Presencing*. San Francisco: Berrett-Koehler

²⁵DeKay, *Integral Sustainable Design*

²⁶Erhard, Werner, Michael C. Jensen, and Kari L. Granger (2013). "Creating Leaders: An Ontological/Phenomenological Model". Harvard Business School Negotiation, Organizations and Markets Research Papers, Harvard NOM Unit Research Paper No. 11-037

²⁷DeKay, Mark and Göritz, Hansjörg (2016). 'In the Beginning Were Buildings: the radical idea of learning architecture by designing it'. National Conference on the Beginning Design Student, San Luis Obispo, California

²⁸Darling, Marilyn, Heidi Guber, Jillaine Smith and James Stiles (2016). "Emergent Learning: A Framework for Whole-System Strategy, Learning, and Adaptatio". *The Foundation Review*, Vol 8, Issue 1, Article 8.

STREETWISE SIX – A BOARD GAME

Using a board game as a learning platform between politics, academia and everyday life

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ABSTRACT

The obvious gap between top-down planning and bottom-up research emerged as one of the main lessons from a two-year practice-based, academic community engagement programme in the suburb of Rosettenville within Johannesburg, South Africa. As a reaction to this planning-research gap, we developed the board game *Streetwise Six* by way of an active learning tool for a variety of stakeholders. The aim of the learning tool is to provide a broader understanding of neighbourhood planning and design processes in different contexts and intersecting scales, addressing aspects from community engagement, classroom and professional planning to design and urban frameworks and policies. The game is about the development of a diverse neighbourhood in a suburb of Johannesburg and is based on facts and findings in the existing context.

KEY WORDS:

- game
- learning tool
- neighbourhood planning and design
- cross-disciplinary

INTRODUCTION

Streetwise Six is an interactive board game that simulates the transformation of a residential street into a mixed-use high-density neighbourhood with public space development, linked to the private investments. Players act as property developers trying to build numerous and diverse buildings types, and endeavour to activate their public edge through liaising with a multitude of influential characters.

The game was initially developed as a response to challenges encountered, especially related to access to context and communication with stakeholders in the Rosettenville Studio (RS). RS was a two-year practice-based, community engagement programme by the School of Architecture and Planning at the University of the Witwatersrand (Wits), under the auspices of the Centre for Urbanism and Built Environment Studies (CUBES)¹. *Streetwise Six* aimed to address the obvious gap between top-down planning by the City of Johannesburg, bottom-up research by RS, and access to the residents of the area. Based on the rules of the existing popular card game *Citadels*² by Bruno Faidutti, it adds the three-dimensional component to the



street in the form of a pop-up game board. The inherent storyline, character selection, building components and political scenarios are entirely based on 'Rosettenville facts', research and findings of the studio and actual events. It thus connects directly to the everyday of a suburb in Johannesburg and playfully guides the participants from different perspectives into complex, real-life challenges in South Africa's urban environment.

The paper will outline the game's background, its resulting mechanisms and demonstrate active learning potential for students, community and professionals through what Peter G Rowe calls 'Actionable Knowledge'³, using information collected from various game events in different contexts. It will review its value as an educational tool in the disciplines of architecture, urban design and planning through literature, participant feedback, and as part of the international *Turning Tables*⁴ initiative. These were propositions by eight urban laboratories of higher education institutions across the world⁵, for different forms of inter- or trans-disciplinary research and learning, with *Streetwise Six* representing CUBES/Wits University. It was an open educational programme, online platform and collateral event, in 2016 at the 15th International Architecture Exhibition, *la Biennale di Venezia*, *Reporting from the Educational Front*.

BACKGROUND: THE CORRIDORS OF FREEDOM AND ROSETTENVILLE STUDIO

Mkhabela and Doermann describe the background of the game as a political one.⁶ From an urban layout that blueprinted the apartheid ideals of segregation and racial discrimination in space, the streets of Johannesburg are supposed to become the foundation of "a model city where all its residents will have equal access and prosperity [...] irrespective of race and gender".⁷ Executive Mayor for the City of Johannesburg, Councillor Mpho Parks Tau announced this transformation goal in May 2013 with the introduction of the Corridors of Freedom (CoF), a strategic series of transport arteries linked to mixed-use development nodes with high-density accommodation.

One of the future arteries of change is the Turffontein Corridor that connects the suburb of Rosettenville to the centre of Johannesburg. Located 5km south of the CBD, it was established in 1889 and named after Leo Rosenstein, who surveyed and sold the stands in the area. It was initially intended as an upper-class neighbourhood, but its proximity to the mines and the related dust and noise did not attract the targeted buyers. As a result, the area soon became home to English-speaking working class families who were joined in the late 1930s by low-income, Afrikaans-speaking South Africans. ➤

1: *Streetwise Six* game board in play



STUDENTS AND RESEARCHERS OF THE ROSETTENVILLE STUDIO TOOK THE OPPORTUNITY TO WALK THE STREETS AND EXPLORE MULTIPLE LAYERS OF EVERYDAY LIFE, INCLUDING NON-FORMAL PROCESSES WITH OFTEN INVISIBLE, YET HIGHLY ORGANISED RULES AND REGULATIONS IN A SPECIFIC CONTEXT

2: Elements without game board

3: Public good

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Everyday life in Rosettenville today seems vastly different from these beginnings – four waves of migration have drastically altered the residential profile along with the urban morphology, public spaces and socio-spatial hierarchies. After the arrival of an estimated 50 000 white Portuguese migrants in the late 1940s, an increasing number of Mozambican and Angolan migrants followed in the 1970s. This turned into a continuous influx of migrants from Southern African Development Community (SADAC) countries after the country's first free election in 1994, and the related lifting of apartheid's racist legislation. Rosettenville's current realities share the issues and concerns of other low-income suburbs in Johannesburg with a transient population. This results in a particular framework for urban research, in practice and academia. Mkhabela and Doermann phrase it: "Working situations remain grey, statistics opaque, research anecdotal and deeper explorations dangerous."⁸

While the CoF project had to deal with deadlines linked to capital budget timeframes as pressing reality, students and researchers of the Rosettenville Studio took the opportunity to walk the streets and explore

multiple layers of everyday life, including non-formal processes with often invisible, yet highly organised rules and regulations in a specific context. They recorded stories in parks, churches, and clubs, and investigated the socio-economical narratives of backyards and rooms. The overall picture, however, remained fragmented, academic interventions as well as official projections by the City of Johannesburg (CoJ) seemed to search (and miss) local relevance in their proposal feedback. As Mkhabela and Doermann resume, "one of the enduring mysteries of the area was the lack of understanding of the broader communities due to access and communication issues. The gap between top-down planning (by the city) and bottom-up research (in the city studio) became obvious and conflictual. Channels for discussion and exchange were often dangerously blocked. Who was supposed to be learning from whom? How? And what exactly?"⁹

One of the catalytic developments in the Turffontein precinct is centred along the creation of a linear park in De Villiers Street. The park will morph over the existing road in between its boulevard of old trees. This public investment, together with increased land use rights on adjoining properties, is expected to trigger private development along the park. Currently, mostly one-storey bungalows are placed in a priority densification zone of four to six-storey heights. Simultaneously, the unstructured interviews of the RS students, lecturers and community liaisons with residents revealed that few owners have access to capital and planning design resources, or a visual understanding of abstract planning terminology used in the Strategic Area Framework.

STREETWISE SIX: ELEMENTS AND RULES

It is against this critical gap in knowledge exchange that *Streetwise Six* has been developed. The game manual summarises the main aim as *how to build a diverse street* – Mkhabela and Doermann explain "the underlying



purpose being to begin a conversation on urban access and layers of densification along the Corridors of Freedom through some form of simulated reality that can include a multiplicity of participants.”¹⁰ Rosettenville Studio explores teaching and learning, from and for lived realities, of multidimensional communities, as an infinite loop between practice and education: lessons from the street are translated onto a game board, that reaches beyond the classroom into the boardroom, and back onto the street. More and different buildings, new urban alliances and protection against unforeseen catastrophes, through private investment in public space, form the basic rules of the game.¹¹

The elements: 6 pop-up game boards; 1 disaster wheel; 8 character cards; 6 sets of 15 pop-out building cards; 6 sets of 8 public goods; 1 dice; and a container with Rose Rand currency.

The set up: Each player is a property developer for one portion of the street, which comprises eight properties on their game board. Four to six players are each responsible for the development of the neighbourhood. The aim is to increase the street’s prosperity by increasing its density, equipping its public space and building new, diverse buildings found in Rosettenville or proposed by the Corridors of Freedom.

Building cards: Players choose from four categories of buildings that represent the powers at stake in the area, and are colour-coded in the game: municipal (yellow); communal (blue); private trade (orange); and shadow businesses (pink). Municipal buildings (yellow) include public housing *amagumbi* (transl: rooms), library *bari mu yi magana* (transl: let’s talk), safety centre *quero ver você* (transl: I watch you), healing clinic *Mpilo* (transl: oxygen). The community building (blue) is rare and wanted: a community soup kitchen *gogo Thobeka* (transl: grandmother wisdom). Private trade buildings (orange) cover Mr Moko’s spaza lounge (transl: non-formal convenience store), energy station, rooms to rent, Mirjam’s tailored dreams, pawn shop give and take,

chesa nyama snack bar (transl: barbecue bar). Lastly, shadow business buildings (pink) consist of Cecilia’s boarding house, pick-me-up shebeen (transl: bar), Sangita nightclub, and microloan den.

Character cards: The making of a multifaceted street needs many partners. Only by connecting with the influential key characters of Rosettenville can success be achieved. In each round, the players build different alliances with the urban healer, hitman, tsotsi, drug lord, mayor, the entrepreneur, architect, and development agent to speed date with a variety of characters, and use their different abilities. Four of the characters are directly linked to the four building types: the mayor collects municipal investment returns (yellow), the entrepreneur is trading with extra income (orange), the urban healer is in charge of the community soup kitchen (blue) and is untouchable to the drug lord who reigns over the shadow buildings (pink) and can destroy buildings. The other characters have powers, but no property link: the architect can build more than others can at a time, the hitman immobilises another player of choice, the tsotsi steals, and the development agent can rezone by exchanging buildings.

The rules: The local currency Rose Rand is distributed in each round and enables the players to purchase properties and public goods. The alliance with one of the eight characters, in each round, enables each developer to pursue a strategy to succeed in their vision of diverse neighbourhood design. A special role is attributed to the public good.

The power of benches, streetlights, water taps, street trading, hot spots, public toilets, neighbourhood watch, and urban vegetables is significant. Their placement along the road can stop the destruction of buildings and protect from unforeseen catastrophes on the disaster wheel.

At the end of each round, the number on the dice determines if a catastrophe destabilises the situation at stake: the head of states conference endangers shadow

4: Building cards

5: Property developer



6

6: Character card for tsotsi (Design: Fred Swart)

buildings due to clean up, service delivery protest threatens the municipal structures or loadshedding limits the private trade. The game ends when one player has built on all eight properties. The winner is determined by adding up the points of diversity, which is measured through colour codes on buildings and the furnishing of the public space. The game can be played with three different sets of

rules, so as to respond to different groups of players (residents, students, academics, professionals, politicians, gamers), and degrees of complexity regarding strategic decision-making and alliances and takes 60–90 minutes per round.

THE BOARD GAME AS EDUCATIONAL TOOL

Serious games are, as Chen and Michael define, “games that do not have entertainment, enjoyment or fun as their primary purpose”¹². *Streetwise Six* is a multiplayer, competitive and social board game about city-making to enhance communication and knowledge exchange between different role players of the built environment. As such, it is a ‘serious game’ with educational characteristics that are game-based. This means that the game features goals – as opposed to play-based games, which lack goals, the two categories that Djaouti, Alvarez, Jessel introduce in their G(ameplay)/P(urpose)/S(cope) model about the classification of serious games.¹³ This differentiation is introduced as it features in the participant feedback in ‘room for improvement’.

THE GAME CAN BE PLAYED WITH THREE DIFFERENT SETS OF RULES, SO AS TO RESPOND TO DIFFERENT GROUPS OF PLAYERS (RESIDENTS, STUDENTS, ACADEMICS, PROFESSIONALS, POLITICIANS, GAMERS), AND DEGREES OF COMPLEXITY REGARDING STRATEGIC DECISION-MAKING AND ALLIANCES

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The intention of this part of the paper is to elaborate on the value of *Streetwise Six* for teaching and learning in an educational system that operates at the intersection of academia, community engagement, and professional practice on an urban scale. This intersection implies that we are dealing with a mixed audience with different expertise and expectations. As a result, value and

outcome might differ from set up to set up, depending on recipient and context. However, for all players, the game constitutes a kind of simulated reality, a simplified model that helps to access complex issues. For some students, the simulation is the closest they might get to the realities of the street, while for residents, *Streetwise Six* represents an abstracted version of their life, and for professionals, the game offers a possibility to demonstrate spatial developments in context.

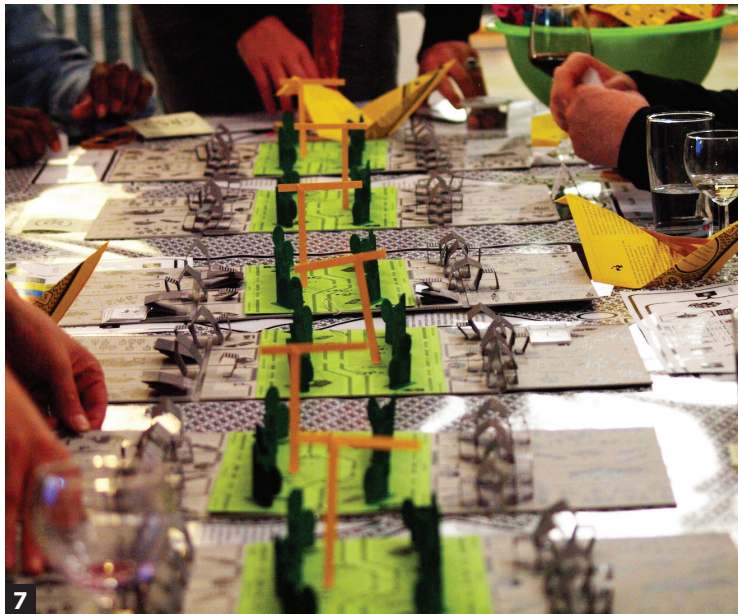
As Doermann recently summarised for the *Turning Tables* online platform¹⁴, “games are commonly understood as an activity in which a number of participants compete to reach a set goal under a specific set of rules.” In urban education, they are established tools, latest since Buckminster Fuller’s *World Game* in the 1960s that aimed to “make the world work for 100% of humanity in the shortest possible time through spontaneous co-operation without ecological damage or disadvantage to anyone”¹⁵.

Other, more recent, professional initiatives such as “Play the City”¹⁶, an Amsterdam and Istanbul-based city consultancy firm, that helps governments and market parties effectively collaborate with stakeholders, seem to work less absolute and understand “playing a game as a voluntary attempt to overcome unnecessary obstacles,”¹⁷ as the philosopher Bernard Suits phrased it. They address one situation at a time, in very specific local conditions, within a diverse network of players and consider their *learn by doing method* as a most appropriate approach to develop actions plans for dynamic urban development in the 21st century within a professional context.

In *The Community Planning Handbook*, Nick Wates recommends developing games that “mirror real life planning scenarios”¹⁸ and enable people to understand each other’s viewpoints, possibly role-playing. In the overall process of physical planning and design, he places it in the very beginning, mostly as an icebreaker without any specific output, but potentially collects issues to be addressed on the design agenda.

From an academic perspective, Colby King and Matthew Cazessus state in their investigation on *AudaCity*, a board game for urban studies, that “all game-based learning techniques break from the traditional lecture structure by providing students with the agency to exert some control over the learning framework. ... As [they] evaluate, strategise, and compare their choices, they develop a robust experience with the course’s theories and concepts – turning the abstract into something ‘real’ they can reflect upon.”¹⁹

Interestingly *Streetwise Six* worked the other way around in terms of process. It started from collecting everything ‘somehow real’, on the street, in people’s houses, in ward meetings and boardrooms, in spaza shops, soup kitchens and on the official reports, and turned it into an edited, simplified version of that reality, carefully designed so it looked similar enough to feel familiar. The mayor’s catalytic flagship development transformed into a pop-up game board



that visualised people's stories and their houses of today, overlaid with a public space vision of tomorrow, and modelled roles and rules around existing stakeholders' interests and concerns.

For participants around the table, step number one is to understand the rules and play the game. Step number two would be to project their various interests, challenge the process, negotiate to change the rules and assess the outcome. Alternative scenarios can then be implemented and decisions tested in collaboration to prepare for another, shared reality.

Streetwise Six takes advantage of key game components such as challenges and interaction to simulate and reimagine urban situations in different modes, from role-playing to rule-making, public-private partnerships and spatial design proposals. Knowledge production becomes a playful combination of skill, strategy and chance that are tested through different players and participants who share experiences and extend perceptions across the board. It can turn the table into a platform of communication and exchange. It is part of a professional design education that pursues what Rowe explains as the concept of "actionable knowledge", a hybrid and inadmissible form of knowing that is:

- invariably situational – problem definition leads to problem solution and vice versa
- neither clearly analytic nor synthetic in orientation
- heuristic in some irreducible way, meaning knowing includes guesswork, informed hunches, well-tried practices.²⁰

EXPERIENCES ACROSS SCALE AND CONTEXT

King and Cazessus state in their game evaluation that the first question to ask when assessing the effectiveness

of a serious game is "does the student learn with this product what he/she is supposed to?"²¹. In our case, this is slightly more complex, as we deal with multiple stakeholders, various potential learning objectives and a game, where the winning for some of the participants seemed to become secondary to the process of playing it. We therefore propose to rephrase as follows: Does the product learn from its players what it is supposed to? The ultimate product being a part of the city, which the game is virtually representing.

The initial motivation for the development of the game was to simply get different stakeholders of academia, politics, and everyday life around one table and deal playfully with their shared territory: the streets of Rosettenville. The openly hidden agenda was to make them listen to each other and engage with their differing perceptions and aspirations. The first official pilot game was played with Rosettenville residents, city officials, property developers, professional architects and urban designers, academics, and students of various streams of the built environment. This was preceded by several test runs with semi-professional gamers and followed by a collateral event of the *Turning Tables* project in Venice with professional urbanists, architects, research fellows, and developers. After each game, extensive feedback was given with the following objectives: a) to prepare a workshop intervention for architecture, urban design and planning students with local activists and politicians that includes a reconfiguration of rules with explicit policy design intentions followed by an evaluation of the spatial consequences; and b) to prepare a workshop intervention for local property owners that includes incremental property extension guidance, both financially and design wise. Both occasions are to be followed by a post-play writing assignment that ►

7: *Streetwise Six* set up

8: Strategy development



9: Let's play: the neighbourhood and the street

10: Disaster wheel (Design: Fred Swart)

applies an analysis of 'actionable' knowledge processes in the game session, in comparison to real-world urban dynamics. The original game manual ends with a winner who is not necessarily the fastest to complete, but has the most diversity points. Critical feedback of the urban professionals of the *Turning Tables* showed, however, that the participants seemed to be more interested in ways to alter the development of the street, where to place the new buildings, how to design the thresholds from public to private, and to build partnerships amongst each other outside of the character cards, than actually following the rules to win. Third-year planning students echoed a similar sentiment after the game was used as an introduction to an urban design course. They began to consider policy development as a speculative strategy with spatial effects, as opposed to administrative, theoretical text. The power of game characters – with mainly negative connotations in real life, like the tsotsi and the hitman – generated debates about the transfer of these stereotypes into power positions, and instantly linked to real-life governance in South Africa. The game

¹Rosettenville was the location of a city studio in 2013/14. The 'city studio' is a University of the Witwatersrand learning and service initiative that entails training Architecture and Planning students to work with communities, and to locate their professional practice in real-life situations to disseminate findings to residents in a way that enables them to use them for advocacy and sustainable development. RS formed part of (so far) three studio foci in Yeoville, Rosettenville and Braamfontein. RS has been deeply embedded in the academic curriculum of both programmes, architecture and planning, and used the local context as urban laboratory. Thirteen courses were involved over two years, from second-year to honours level, in architectural design, history of planning, housing theory, land management, urban design, policy, mobility pattern, sustainability and comparative African cities. In addition, individual research projects have been completed in the honours/planning degree. A detailed report is available on request through CUBES. The authors were part of RS as educators and researchers, RS head of city studio and community liaison. RS was financed by the GIZ and the Rosa Luxembourg Foundation.

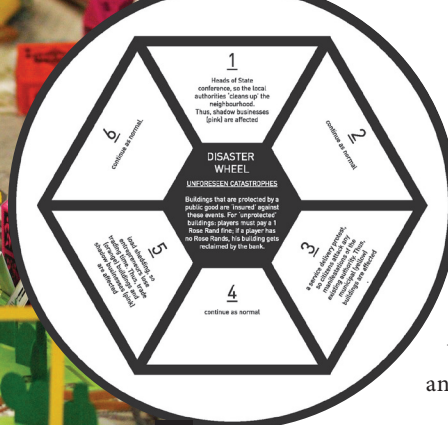
²*Citadels* is a card game by Bruno Faidutti that centres around the evolution of competing cities. The hiring of various characters to the cause – from architects to thieves – adds a significant level of strategy and careful consideration to the game play, <https://www.rpg.net/reviews/archive/10/10836.phtml>.

³Peter G. Rowe, "Professional Design Education and Practice", *Architectural Education Today: Cross-cultural Perspectives*, Eds. Ashraf MA Salama, William O'Reilly, Kaj Noschis, (Lausanne, Comportements, 2002), 25.

⁴www.turning-tables.it.

⁵<https://www.wits.ac.za/cubes/projects/urban-lab-network/>

⁶Parts of this paper have previously been developed as a contribution to Urban Lab and London Symposium on Global Higher Education, 16–17 September 2015. Solam Mkhabela, Kirsten Doermann, "Let's Play Dinner, Global Education for Global Futures", Series Eds Ben Campkin, Rebecca Ross, (London, Urban Pamphleteer 5), 2015, 19.



board turned into a model, that demonstrated otherwise abstract spatial conditions and politics, and expanded beyond its rules into the base of an open engagement process.

CONCLUSION

The board game *Streetwise Six* was a response to the many challenges of academic community engagement, and a real-life experience for students, specifically if the intention is about reciprocal benefits and actual change, something the Rosettenville Studio strongly pursued. Initially developed due to its social skill to connect street, studio and boardroom players, it has shown the potential to adapt to various circumstances and requirements. The game playing should always be embedded in a broader discussion around the issues it is addressing. From an educational point of view, *Streetwise Six* has the capacity to develop into a serious game that is an integral part of urban studio teaching, as a motivation enhancer for those who are interested in a complimentary learning style, either as an introduction to urban complexity, or as an advanced strategic planning tool. From a community point of view, it can serve as a visual simulation of otherwise abstract regulations and powers at stake. The accessibility aspect will be supported by the connotations of domestic entertainment that board games can have. From a professional point of view, it may be considered a discussion support tool to demonstrate developments in a playfully formalised method of participation, or, as locally active politicians and businesspeople have proposed, take the centre stage of a fundraising event for public space improvement. The Corridors of Freedom implementation deadline is 2040: who is supposed to be learning from whom, and what? Let's continue to play and see. ■

⁷City of Joburg, Corridors of Freedom, http://www.joburg.org.za/index.php?option=com_content&id=8623:corridors-offreedom&Itemid=114, accessed 20.7.2016.

⁸Solam Mkhabela, Kirsten Doermann, "Let's Play Dinner, Global Education for Global Futures", Series Eds Ben Campkin, Rebecca Ross, (London, Urban Pamphleteer 5), 2015, 19

⁹*ibid*

¹⁰*ibid*

¹¹David Michael, Sande Che, *Serious Games: Games That Educate, Train, and Inform* (USA, Mason, Course Technology Cengage Learning, 2006), 21.

¹²Damien Djaouti, Julian Alvarez, Jean-Pierre Jessel, "Classifying Serious Games, The G/P/S model", *Handbook of Research on Improving Learning and Motivation through Educational Games: Multidisciplinary Approaches*, IGI Global, ed Patrick Felicia, 2001, http://www.ludoscience.com/files/ressources/classifying_serious_games.pdf.

¹³Kirsten Doermann, Introduction to Games, *Turning Tables*, http://www.turning-tables.it/pt_topics/games/?pid=51, accessed 20.7.2016.

¹⁴*ibid*

¹⁵Play The City, founded by Dr. Ekim Tan, <http://www.playthecity.nl/>, accessed 20.7.2016

¹⁶Bernard Suits, *The Grasshopper: Games, Life, and Utopia*, (The University of Toronto Press 1978), 41.

¹⁷Nick Wates, *The Community Planning Handbook, Earthscan Tools for Community Planning* (UK Routledge 1999), 68–69.

¹⁸Colby King and Matthew Cazessus, Teaching with AudaCity: A Board Game for Urban Studies, Proceedings of the European Conference on Games Based Learning: 2014, Vol. 1, 272–73, accessed 20.7.2016, http://vc.bridgew.edu/sociology_fac/23.

¹⁹Rowe, Professional Design Education and Practice, 25–29.

²⁰King and Cazessus, 275.

INTERSECTIONS BETWEEN TEACHING, URBAN DESIGN AND FILM

Urban scripting as experimentation.

BY: SOLAM MKHABELA, SCHOOL OF ARCHITECTURE AND PLANNING, UNIVERSITY OF THE WITWATERSRAND

ABSTRACT

The paper explores a process of including social narratives in the making of urban form through the use of audiovisual documentation: *Urban Scripting*. The aim is to so transfer multiple knowledges into the practice of urban design. Two pilot courses, at the University of the Witwatersrand (Wits) School of Architecture and Planning, have worked at the intersection of film and urban design along an activity street in Johannesburg, investigating the underlying theory of audiovisual as a shared language. The paper outlines the background of the study, introduces the studio projects, and reflects on *Urban Scripting*, as a suitable educational method in architecture and urban design.

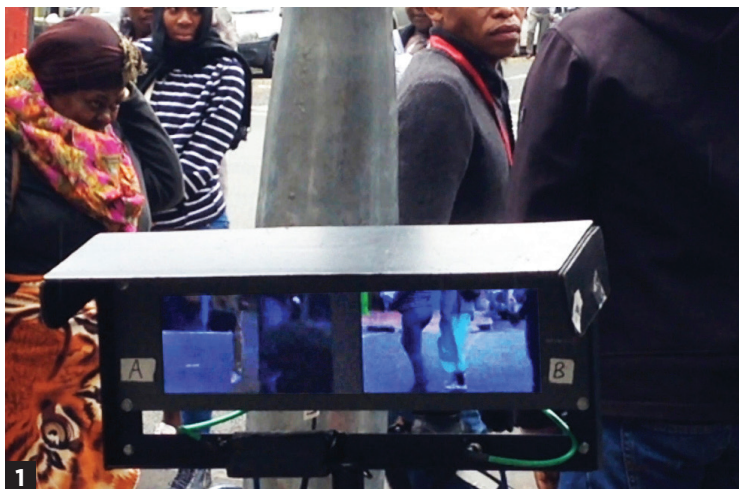
KEY WORDS:

- audiovisual tools
- representation

- street knowledges and perceptions
- participation
- urban design

INTRODUCTION: AIMS

The term *Urban Scripting* describes a process of including social narratives in the making of urban form – through the use of audiovisual documentation – for contextual appraisal of a specific site. The name alludes to the definition of a ‘script’, as a document that outlines all: movements; actions; expressions and dialogues, including characters and settings required for telling a story. *Urban Scripting* is transferred into the practice of urban design and planning as a two-folded analogy: firstly, as the production of audiovisual documentaries, whose scripts follow fieldwork through observation, data and interviews; secondly, as the insertion of these documentaries into the ➤



1: Filming the street in Braamfontein, 2017.

structure, (or ‘script’), of an Integrated Development Plan (IDP), during the analysis and strategy stages. It is the centre point of a larger research project of which this paper is a component¹. It is currently in the stage of fieldwork/ case studies, whose preparations have been supported through two pilot courses – with architecture and urban design students – at Wits School of Architecture and Planning, as initial testing grounds in 2016/17. The aim was to develop an experimental urban framework that links common design elements and real-life stories through the use of the audiovisual along an activity street in the City of Johannesburg.

AS COUNTRIES BECOME EVER MORE URBANISED – AND CITIES DENSELY POPULATED – SO THE DIVERSITY OF THEIR INHABITANTS GROWS AND BRINGS A PLETHORA OF DIVERGENT EXPERIENCES, PERCEPTIONS AND NEEDS

The paper outlines the background of the study; it elaborates on the intersection of film and urban design, through the underlying theory of audiovisual as a shared language. With the choice of the activity street as the site of investigation, two different studio projects are introduced; followed by a reflection of *Urban Scripting* as a suitable method in urban design and architectural education by means of dialogue; narrative; literature; and student and examiner feedback. The approach, research and evaluations are qualitative and remain a work in progress.

BACKGROUND: THE NEED FOR NEW LANGUAGES OF MULTIPLICITY

African cities are growing at an increasingly rapid pace

and are forcing policymakers, planners and urban designers to respond to these evolving urban realities. As countries become ever more urbanised – and cities densely populated – so the diversity of their inhabitants grows and brings a plethora of divergent experiences, perceptions and needs. To make informed decisions about interventions in a public realm, for this newly composing collective, urban practitioners need to understand, capture and represent urban complexity and perceptions of everyday realities. Traditional approaches do not often include these considerations in the design process. South Africa’s efforts to modernise its cities, the need to redress the physical imprint of the apartheid regime, must compete with the present challenges of rapid urbanisation and the pressure for our large urban areas to establish ‘world-class city’ status. Although there have been some key urban initiatives and projects to redress this legacy, cities such as Johannesburg and Cape Town still act as havens for social inequality; reinforcing pre-existing conditions. A sentiment articulated by Todeschini and Dewar (2013), “Starkly, since 1994 with the transition to democracy, the operative paradigm informing settlement-making in the ‘New South Africa’ hardly changed from the modernist, mechanistic, reductionist and functionalist town planning conception which the apartheid ideology found so suited to its ends in the ‘Old South Africa’” (Todeschini and Dewar, 2013: 94).

Sihlongonyane (2015) states, “South Africa still primarily employs intervention instruments drawn from traditional Anglophone and neoliberal [design] practices, which promote land control,” (Sihlongonyane, 2015: 39), but fails to recognise context and people, and thus is unable to absorb the voices and imaginaries of the many. This may, in turn, point to what Ananya Roy (2015) – shying away from the “universal grammar of cityness” (Roy, 2015: 1) – seeks in her essay “Who is Afraid of Postcolonial Theory?” The paper explores themes associated with new geographies of theory (Roy 2009), which are informed through narratives, their location and reference, as new beginnings of understanding cities, as opposed to adding an empirical variation to existing theory. She refers to Abu-Lughod’s vision of “how generalisable models of analysis can emanate from the (ethnographic) study of a single (idiosyncratic) city” (Roy, 2015: 10). Such a discourse is further explored by Vanessa Watson’s paper (2016) “Shifting Approaches to Planning: Global North and South”, purporting new theories in the South, which is based on notions of “societal conflict, informality, identity and ethnicity” (Watson, 2016: 32). Both these researchers deal with the essential issues of contextualisation, the relationship between people, place, knowledge and power, as opposed to the notion of universalism.

Within the South African urban practice, a number of professional and academic interventions have approached this issue in individual attempts (for example, the work of Albonico and Sack Metacity², 26’10³, Local Studio⁴, CUBES City Studios⁵, UCT Winkler⁶. Nevertheless, few projects seem to be able to

communicate the analytical investigation successfully to the decision-making authorities, the concerned residents and users; or to translate the findings and implement a flexible, yet solid, design proposal on (and of) remaking.

Harrison, Todes and Watson (2007) call this the professional challenge of multiculturalism in times of social conflict. It is in this context that *Urban Scripting* takes advantage of current technological advancements, which have granted wider access of audiovisual media to a larger audience. People's familiarity with film is considered as a "kind of shared, lay literacy" (Schmertz, 2008: 2) and a basis for its emergence as an experimental method to present new languages of multiplicity – a practice that enables us to "listen to the city murmurs, to catch stories, to read signs and spatial poetics" (Sandercock, 2010: 117). It attempts to address the fundamental issue concerned with how to represent contextual expertise beyond conventional and often western-centric measures (Hall, 2017).

Thus, the study focuses on the potential of audiovisual media, as a communicative tool, to augment mutual understanding in the reality and academic training of urban design interventions.

DIGITAL ETHNOGRAPHY IN URBAN DESIGN: FILM AND THE CITY (593)

Urban Scripting describes a participatory action research method; it uses digital ethnography as a tool for understanding and communicating local context – and people's perceptions – to a variety of stakeholders. It utilises observing; recording; documenting; and reviewing, collectively rethinking – via an engagement process – back to observing, recording and documenting. Digital ethnography involves the telling of people's stories in the digital age using different expressive languages. Giovanni Attili (2010) – when describing digital ethnography – states, "digital ethnographies embody a possible knowledge path that is made of imaginations, poetical gestures, and aesthetic experiences." (Attili, 2010: 51). It is literally a hybrid of ethnographic research into the understanding and description of peoples and cultures (along with their habits, customs and shared differences) and the use of digital audiovisual tools for indepth and contextualised observations. The research thus utilises audiovisual tools as a complement to qualitative social research including participant observation methods.

In practical methodological terms, this means using digital formats for recording; observing; communicating; and receiving and transmitting qualitative data from a field study. As a method, fieldwork is undertaken using a range of techniques for dealing with qualitative data in all its forms such as field notes; Google earth positioning; aerial and street photographs; audiovisual recordings; documents of varying types; and archival data. Audiovisual techniques are employed in the quest to forge better human connections and to understand peoples' voices in an urban context. It does this by using video as an engagement tool within a qualitative research paradigm. Digital ethnography is essentially possible

because of the digital revolution in technological events such as access to the internet. This includes Vimeo, YouTube, social media platforms, live streaming, etc. Digital formats are utilised to understand the strengths and limitations of engaging in participant observation of digitally-mediated communities⁷ under enquiry. New tools offer new communication technologies for nuanced and richer urban street voices to be heard. Capturing the vocabulary from 21st-century citizens, voices located in the margins of complex, multiethnic cities, made up of diverse, discerning individuals and communities.

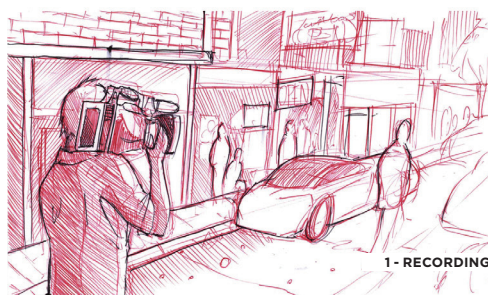
DIGITAL ETHNOGRAPHY INVOLVES THE TELLING OF PEOPLE'S STORIES IN THE DIGITAL AGE USING DIFFERENT EXPRESSIVE LANGUAGES

For these voices to be heard and communicated, the analysis is interpreted into audiovisual stories, which creatively express authentic and meaningful narratives constructed from a plurality of assorted languages. In an important example of the use of digital ethnography, Sandercock states, "Multimedia offers the latest technologies in the service of the oldest of human devices for understanding and inspiring: that is, stories" (Sandercock, 2010: 35). The idea of storytelling seems an appropriate trope; with many South Africans coming from an oral tradition, whereby grandmother would tell bedtime stories (*tingwanekwane*⁸), to teach about the world, lull to sleep, and to inspire. This tradition and purposefully subjective ethnographic analysis suggests possibilities, taken from everyday life today, to be debated through a spectrum of options for everyday life tomorrow; as a provocative "dialogue in decision-making contexts" (Attili 2009: 261; Sandercock, 2010: 60). *Urban Scripting* is thus envisaged as a guidance tool that helps to link bottom-up and top-down processes more productively, using narrative. The project places itself in the context of audiovisual enquiries and experiments that have been carried out since the beginning of the 20th century; ranging from *The Social Life of Small Urban Spaces* by William White – a groundbreaking form of observation recording and subsequent quantitative analysis from 1980 with a 16-mm film camera – to *Highrise*, a multimedia collaborative documentary experiment⁹ directed by Katerina Cizek on life in residential skyscrapers; and Attili's and Sandercock's community film, *Where strangers become neighbours*, for the Collingwood Neighbourhood House in Vancouver. It is within this realm that *Urban Scripting* interrogates the course of capturing, transmitting and representing otherness in Johannesburg's complex and divergent urban development. ➤



2: Jorissen Street, Braamfontein, aerial view west to east 2017.

3: Digital ethnography on Jorissen Street, by Adam van Zyl.



1 - RECORDING



2 - DOCUMENTING



3

3 - REVIEWING



4 - COLLECTIVELY RETHINKING

URBAN SCRIPTING AS EDUCATIONAL PROCESS: STUDIO PROJECTS

THE STREET, FROM BACK TO FOREGROUND AND BACK

Whilst problematic and questionable processes of conceiving accessible city spaces for all, (as pointed out by Todeschini and Dewar) are found in many sites in the South African public sphere, this study examines the development of the street, and in particular the street as an arena of activity – the most rudimentary and elemental aspect of public space – in the city of Johannesburg, as a key example for other forms of urban transformation¹⁰. Streets – despite being the biggest entity of public land use – make up some 20–25% of urban areas (Todeschini and Dewar, 2013; Jacobs, 1993, notes 25–35% in the States) yet lack a regular body of theoretical work¹¹ that explores the simplicity of the void at the intersection between architectural and urban form in its complexity as political, socio-economic and cultural project as Guidici lays out. The combination of basic accessibility and need for more layered knowledge of the sensitive thresholds from public to private – in theoretical understanding and experiential readings – make the street an ideal setting for a series of experimental studio projects. These were established in close proximity to Wits University in Braamfontein; an area regularly frequented by students. The set-up of the studios refers back to the two-folded analogy of *Urban Scripting* as described in the introduction: the production of audiovisual narratives, and the insertion of these narratives into an urban design development, during the analysis and strategy stages. In the classroom, an initial study of films set on streets as a main location complements the preparation for

professional practice; following Penz' *urban narrative layers approach* to decipher the language of city films, which positions the idea that cinema and the moving image are particularly suitable to grasp complex urban phenomena. *Urban Scripting* goes a step further and asks: If some films, like *Do the Right Thing* (1989) from Spike Lee, or *Jerusalem* (2008) by Ralph Ziman, appropriate the street as a location, as a real-life stage – and “their narratives help introduce the complex intersection of urban form and social life that designers should address as they shape the environment”¹², as phrased by Strickland – could the actual process of designing a street learn from film narratives, or borrow from the filmmaking structure to work within this intersection?

This experimental process has been explored in a second-year architecture graphics elective, a third-year planning urban design stream and an advanced Master of Urban Design Accessible City Studio project in multiple scales.

SETTING

The pilot project is located on Jorissen Street in Braamfontein – on the periphery of Johannesburg's inner city – where two urban design frameworks are currently competing for implementation. One framework, developed by Wits Campus Planning and Development with the Reimagine Wits Properties Programme (RWPP), focuses on pedestrian access and sees the campus displaying a more porous edge to Braamfontein. The framework designers and clients envision a slow pace street, lined with trees and streetlights, for people and non-motorised transport (NMT), presenting three possible NMT entrances into the campus for wheelchairs and cyclists, and future locations of cycle racks¹³.

Date	Stage	Theme	Action	Deliverables
Week 1	1. Development	Intro	Location pre-scout	
Week 2	1. Development	Concept	Synopsis – Treatment	Synopsis
Week 3	1. Development	Street narrative	Script – Pitch	Treatment – 5%
Week 4	2. Pre-production	Location scout	Recce	Conceptual storyboard – 10%
Week 5	2. Pre-production	Visual narrative	Storyboard	Final script – 5%
Week 6	2. Pre-production	Visual conception	Shooting Schedule	Shooting schedule – 5%
Individual work	Human Rights Day	Pre-visualisation	Photomatic Articulation	
Individual work	Mid-term break	Pre-visualisation	Shooting	
Week 7	3. Production	Progress report – access	Shooting	Photomatic presentation – 10%
Week 8	3. Production	Progress report – activities	Shooting	Time-lapse – 10%
Week 9	3. Production	Progress report – publicness	Shooting	Dailies up to today
Week 10	4. Post-production	Segregation	Opening titles	1 st edit – 5%
Week 11	4. Post-production	Negotiation	Closing credits	2 nd edit – 5%
Week 12	4. Post-production	Streetness	Final mix	3 rd edit – 5%
Hand in	5. Distribution	The Story of...	Final cut lock	Final Film – 30%

The other framework, designed by GIBB Engineering & Architecture in 2015 for the City of Johannesburg Managed Lanes initiative, sees the street as a managed lane for public transport vehicles. It prioritises high-speed mobility, seeking to declare the street a high-speed connector within a larger motorised city transport network. Councillor Christine Walters, a member of the Mayoral Committee for Transport, states on the City of Johannesburg's official website (2015) that the managed lanes give public transport and pedestrians top priority. She adds that some of the advantages include higher travel speeds, which reduces time spent on the road¹⁴. The City's vision for Jorissen is to be a faster travel street, for vehicles and people to move through not to linger.

The official vision places very limited consideration on street life, quality of place and its many characters. It largely ignores streetwalkers, shop owners, informal traders, schoolchildren, municipal workers, foreign arrivals and urban opportunists. This is the gap the studio attempts to address. The students are placed in between the debate of fast and slow lanes, and encouraged to put themselves in the game. They are tasked with the investigation of street realities under the microscope of the camera lens and develop a proposal as to *how to include social narratives in the making of urban form*. The choice of perspective is of personal nature – theirs.

STRUCTURE

Bordwell describes the three dimensions of film narrative as the story world – agents, circumstance and surroundings; plot structure – syntax and arrangement of the parts of the narrative; and narration – the moment by moment flow of information about the story world¹⁵. In language, the story

world would be the semantics, plot structure and grammar, and the narration would be the verbal style. Referring to the story world of urban design, one could draw the analogy of urban narratives – people, their stories and the street; plot structure – the politics of access; and narration – modes of communication – specifically audiovisual.

Typically, class briefs encourage students to frame their project frameworks using a methodology that includes the subsequent sections: historical development; site and context evaluation; vision; design guidelines and principles; design concepts; key design; and implementation and phasing. *Urban Scripting* overlays these structures and particularly expands site and context evaluation. Using film as a method, it aims to illustrate connections to site, existing characters and

Schedule Film Elective: Urban Street Narratives, from spaces of segregation to spaces of negotiation. The story of social life on Jorissen Street – what does accessible mean? Perceptions from eyes on the street in audiovisual format.

MULTIMEDIA OFFERS THE LATEST TECHNOLOGIES IN THE SERVICE OF THE OLDEST OF HUMAN DEVICES FOR UNDERSTANDING AND INSPIRING: THAT IS, STORIES

real-time motion – which are challenging to capture in the conventional academic classroom. This is combined with the introduction to a new technique and related processes. Three basic phases constitute the main structure:

1. Learning from film's street scenarios: Street analysis.
2. Learning from people's everyday lived street realities and desires: Street knowledge. ➤



4: Minkhenso Nyalungu featuring as a street musician, film by Adam van Zyl.



3. Telling the story, through urban design, of tomorrow's Jorissen Street: Position statement.

EXPERIENCES

The work produced in the course of *Urban Scripting* has been surprisingly successful on the level of exploration – and unexpectedly challenging on the level of execution. The students generally grappled with the understanding of the filmmaking processes – the necessity of script development and storyboarding, before any audiovisual recording, requires focus, patience and discipline. The skill of framing – conceptually and graphically – took, for some, more time than allocated on the timetable. Editing entails exclusion – telling one story, convincingly, in a linear arrangement of moving images; it requires the ability to cut out others. The lack of audiovisual recording and editing equipment in the school was problematic and should be a serious consideration in similar experiments. The creative mobile phone production has foreseeable limits and is certainly not ideal to introduce the importance of digital ethnography into the urban design curriculum.

URBAN SCRIPTING – AS INTERSECTIONS BETWEEN TEACHING, URBAN DESIGN AND FILM – IS BASICALLY AN EXERCISE TO APPROACH DESIGN IN AN URBAN ENVIRONMENT LIKE A FILMMAKER

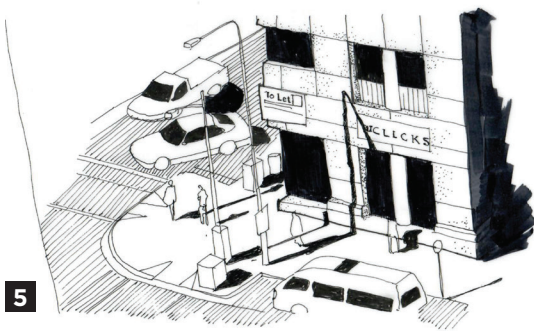
This being said, the students that worked creatively within the limits of possibilities – and who understood the process of filmmaking and documentary – produced excellent outcomes in parts – storyboards, location drawings, character and talent profiling, acoustic material, street narratives, and eventually three-minute film clips. The graphic elective architecture second-year students did not have to develop urban proposals as part of the brief; it explored this particular form of context appraisal minus

the pressure to redesign their 'reading' thereafter. Their approach was thus often more personal: they became part of the street characters – took on the role of investigative (citizen) journalists; simulated a CCTV camera; were street musicians, or simply put themselves in the shoes of a blind person. Here the learning experiences had something of a 'dry run' of reality and contributed to the Jorissen street portrait as one of the multiple voices.

The urban designers faced a more complex task, bringing the scripting back into the profession and potentially linking it the framework as they know it. The projects that included narratives and recordings in the fieldwork and vision produced richer outputs that were clearly recognised by the examiners.

CONCLUSION

Urban Scripting – as intersections between teaching, urban design and film – is basically an exercise to approach design in an urban environment like a filmmaker, from composing scenes to working with narratives and recording of drama to suspense or surprise. The reading of the urban as a live film set offered a useful structure for students to deal lightheartedly and visually with the complexity of the site and its multiple realities. Apart from the technical skills, it allowed the multicultural backgrounds of the participants to enter the debate equally in a new, shared, audiovisual language. The qualitative nature of the digital ethnographic approach has so far not allowed for more general evaluations, nor has it produced measurable data to appraise the application of the methodology, other than "to create a plausible world – one of many such worlds – taken from everyday life", as said by Attili and Sandercock: which seems a much-needed achievement in its own right. It also enables the teaching and practice of urban design to escape the danger of the singular dimension narrative – the "single story that", as Adichie states, "creates stereotypes and the problem with stereotypes is not that they are untrue, but that they are incomplete; they make one story the only story"¹⁶. The question of how audiovisual documentation can be built into the lexicon of tools for educators and learners in the built environment, urban designers, and communities – as a participatory action research method to translate locally adapted research into precise planning and design proposals and more appropriate realities – remains a hopeful work in progress. ■



5



5: Rhythms of Jorissen by Rebecca Scher, concept and film stills as sketch.

¹Urban Scripting: Intersections of Urban Design and Film, The Case of Jorissen Street in Johannesburg, PhD proposal, S Mkhabela, submitted to Faculty of the Built Environment, Wits University, 2017

²APPROACH – We believe in a flexible and responsive approach to development, an approach that enables the formulation of integrated development frameworks that foster the creation of well-balanced and sustainable environments. MISSION – To be able to engage in the process of city building, without illusions, but with the conviction that architecture and responsive urbanism can make a contribution to the development of better places for the individual and the collective. COMMITMENT TO TRANSFORMATION – The principals have a longstanding commitment to social upliftment through the practice and product of their profession and this has informed the strategic focus of the firm. <http://www.asmarch.com/metacity.html>

³Our projects are located in diverse geographical as well as social and economical scenarios. We are equally 'at home' in the inner-city, the suburb, informal settlements and the open landscape. By incorporating critical inquiry and research into the design process of each site, client and budget is carefully considered. Constraints are thus treated as design generators. <http://2610south.co.za/practice.php>

⁴Local Studio sees "community participation as an integral part of their creative process by borrowing ideas from the disciplines of oral history and civic engagement for meaningful outputs". <http://www.localstudio.co.za/philosophy/>

⁵Since 2010, CUBES and the School of Architecture and Planning have been driving geographically-focused, multidisciplinary, community-oriented research, learning and service initiatives in the form of City Studios. <https://www.wits.ac.za/cubes/projects/city-studios/>

⁶My current research interests include two distinct, but related, projects:

1. Critically assessing 'the voice of the poor' in urban policy and public decision-making processes.
2. Critically assessing the role and value of community-university engagements (or service learning) for the enhancement of teaching, learning and knowledge production. <http://www.apg.uct.ac.za/apg/tanja-winkler>

⁷Communities where face-to-face communication occurs alongside information communication technology networks such as WhatsApp groups, social media platforms, and what films are screened in minibus taxis travelling from Alexandra to downtown Jozi.

⁸A fictitious oral narration, storytelling, that is utilised to communicate some useful truth, precept or information.

⁹<http://highrise.nfb.ca/about/>

¹⁰"Gauteng's streets are hostile places, designed to facilitate the rapid flow of motor traffic at the expense of almost everyone who uses them including many drivers. They facilitate enormous flows of people around the city, instead of encouraging economic activity, social cohesion, or indeed any engagement with the city beyond work and home on either end of long, arduous commutes. The value of streets as public spaces connecting people to one another and to the city has been lost. Such street life as survives under these conditions is despite, not because of, the best efforts of public and private actors in the city."

The Gauteng City-Region Observatory (GCRO), February 2017, <http://www.gcro.ac.za/news-events/events/>

¹¹"The last fifty years of theory have not managed to produce a consistent body of knowledge about the street ... [the street] not only as a built form, but rather a relationship between buildings and circulation space. This relationship is not only spatial, but also juridical, and ever since antiquity the definition of what is public and what is private has been a matter of political debate. This ambiguous position makes of the street a fragile moment of negotiation between different interests and weaves together the ambitions and fears of the collectivity to those of the individuals". (Giudici, 2010: 19).

¹²Strickland, Roy, *Background into Foreground: Film as a Medium for Teaching Urban Design* [Media and the City], 2006 Permalink: <http://escholarship.org/uc/item/91k9n1kz>

¹³Cycle Wits University Strategy, Standard for Integrated Planning (2015) Campus Development and Planning and Ludwig Hansen Architects and Urban Designer.

¹⁴Call for public comment on Inner City Managed Lanes (2015)

¹⁵Bordwell, David, *Poetics of Cinema*, Three Dimensions of Film Narrative, Routledge, 2007, pp 1-56

¹⁶Chimanda Ngozi Adichie, *The danger of a single story*, TEDGlobal, filmed July 2009. TED website http://www.ted.com/talks/chimamanda_adichie_the_danger_of_a_single_story?language=en, when introducing her talk states: "Our lives, our cultures, are composed of many overlapping stories. Novelist Chimamanda Adichie tells the story of how she found her authentic cultural voice – and warns that if we hear only a single story about another person or country, we risk a critical misunderstanding."

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PEDAGOGIC TOOLS TO ENGAGE THE COMPLEXITIES OF THE CONTEMPORARY SOUTH AFRICAN CITY

26

Reflections on teaching a design research studio located in Delft.

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ABSTRACT

This paper reflects on our recent teaching experience in a design research studio located in Delft South, a rapidly evolving post-apartheid neighbourhood on the north-eastern edge of Cape Town.

We argue that the cartographic – the view from above, both in terms of height and power relations – is no longer an adequate tool to describe the contemporary South African city. In addition to mapping the city as a physical construct, it is increasingly necessary to use other forms of research that ascribe value to the view from the ground – the everyday, lived experiences and initiatives of local agents. The paper will describe the multiple pedagogies that we used to capture and represent these situated forms of knowledge, namely: walking the city, hearing the city and reimagining the city.

KEY WORDS:

- situated research
- everyday
- new pedagogies

DESIGN STUDIO PILOT

This paper reflects on one year's teaching as part of a three-year design research studio (DRS)¹ currently being piloted in the School of Architecture, Planning and Geomatics, at the University of Cape Town. The studio, entitled Space of Good Hope (SoGH)², is located in Delft South, a rapidly transforming neighbourhood on the north-eastern edge of the City of Cape Town. The studio focuses on the architecture and spatial production of the South African city post-1994, its historic spatial legacies and emerging contemporary spatial practices. The studio foregrounds the political nature of space and explicitly engages with the *transformation of the urban everyday in the contemporary South African city*.

The introduction of the DRS within the graduate programme in architecture at UCT was motivated by three pedagogic principles:

- 1) knowledge co-production – by having the studio jointly co-convened by two staff members,
 - 2) a vertical studio structure that brings together both honours and masters students during the first semester of the year,
 - 3) architectural design teaching that acknowledges the role of research as a significant design informant.
- Delft was first conceptualised in 1989, on the eve of the first democratic elections, as one of the first non-racial³ post-apartheid settlements. Primarily residential, it has been a testing ground for various state housing initiatives. Over the past 20 years, a variety of subsidised freehold houses have been delivered including freestanding RDP houses of various kinds, and more recently attached, double-storey townhouses.

Significantly, over the last 20 years, Delft residents have been actively engaged in altering these houses and in making their neighbourhood more economically

productive. This has occurred both at the scale of individual dwellings through the addition of rental rooms and/or home-based economic activities, and through the transformation of public space for the purposes of trade. Today, Delft South is a vibrant neighbourhood, with a growing amount of original, state-subsided housing being traded on the market for sums of up to R500 000.00.

Delft South was chosen as a significant case study for exploring the new spatialities of the rapidly evolving South African city and an appropriate site to investigate the powerful role of local residents in transforming their environment, in what Iranian urban theorist Asef Bayat has described as “the quiet encroachment of the ordinary”⁴. In his documentation of informal practices, Bayat describes the “silent, patient, protracted, and pervasive advancement of ordinary people on the propertied and powerful in order to survive hardships and better their lives”⁵.

IN ADDITION TO MAPPING THE CITY AS A PHYSICAL CONSTRUCT, IT IS INCREASINGLY NECESSARY TO USE OTHER FORMS OF RESEARCH THAT ASCRIBE VALUE TO THE VIEW FROM THE GROUND

One of the starting points for the studio was to investigate how we as architects could practice in a more politically engaged way to support the initiatives of ordinary residents in *their* production of space. The intention of the studio was to promote spatial practices that accommodate user agency *after* the architects have left the site: buildings that are deliberately incomplete and which function as armatures for further engagement, rather than highly finished and aestheticised objects. The studio was intended to explore how design can become more supportive of users' needs and more amenable to change in the context of rapid urbanisation, increasing poverty and the collapse of formal economic activity.

PEDAGOGIC MODELS

The nature of Delft and the specific agenda of the studio made particular demands on how we taught within the studio.

Echoing the thoughts of architectural theorist Greig Crysler, we argue for an “education for critical consciousness”, asking how knowledge is constituted, by whom, for whom, and for what purpose. Crysler argues for a situated pedagogy. He says that although it is necessary to broaden students' understanding of the social context in which they operate, this should not occur without students and teachers alike “questioning the position they occupy in doing so”⁶. ➤



1: Honours student Wayne van Niekerk's Delft South Assemblage, site of multiple narratives.



Thomas Dutton also argues for a transformative pedagogy in the design studio: “transformative in the sense that the pedagogy sets up the conditions to investigate deeply not only the many issues associated with design, but the nature of design education itself, especially with regard to how knowledge and meaning are produced and disseminated, how social relations are structured, and how students come to see their roles in these activities.” He advocates making “the pedagogical more political and the political more pedagogical”. Dutton notes that in recent times the

THE CITY CAN NO LONGER BE UNDERSTOOD AS A FORMAL MATERIAL ARTEFACT, FIXED IN SPACE AND TIME, BUT AS A FIELD OF EXTENDED RELATIONAL FORCES CONSTITUTED BY THE INTERSECTIONS OF THE SOCIAL, ECONOMIC, LEGAL, AND CULTURAL CONSTRUCTS

voice for an architecture of social responsibility has been weakened within academia and the profession, having been replaced by “aesthetic formalism, esoterica and the desire to build ‘art’ to the exclusion of other important variables”. Schools have been heavily implicated in this process. “The task for educators,” says Dutton, “is to understand and act upon the ideological dimensions of knowledge, and to recognise the inescapable fact that all pedagogical work is political work. ... This suggests that architectural educators critically analyse

the interrelationship between architectural schooling, the profession, and the wider society to illuminate the political nature of recent currents in the profession. This, in turn, will reveal which histories, cultures, and visions are reinforced and legitimised relative to what is produced as knowledge in the design studio.” Dutton suggests moving away from the hierarchies that separate teacher and student by involving students in critiquing the work of their peers; moving away from a model of competition to one of collaboration; and for the studio to become a site “for the production of new forms of knowledge and social relationships”⁷.

These pedagogic models are particularly pertinent in South Africa where traditionally, architectural teaching has equipped students to serve the colonial/modernist/apartheid city – to become, in effect, planners from above, operating on the basis of some unquestioned assumptions:

- a well-endowed and effective government;
- a limited number of large-scale urban agents (municipality, developer, corporation);
- a constrained set of fixed architectural typologies; and
- a set of spatial/legal relationships prescribed by the cadastre, the zoning map and municipal spatial development plans.

The contemporary city and the requirements of a more situated practice, in contrast, make new demands on the pedagogy and require new forms of knowledge.

The city can no longer be understood as a formal material artefact, fixed in space and time, but as a field of extended relational forces constituted by the intersections of the social, economic, legal, and cultural constructs (Simone⁸, Pieterse⁹). Contemporary architectural education should – instead – seek to prepare students for an environment characterised by:

- limited government investment in the creation and maintenance of space;
- agencies that extend beyond ‘the big players’ to include a wider range of urban actors who engage in an

ongoing process of retrofitting the city to their needs; and

- a need for new architectural typologies that accommodate hybrid programmes, in the face of increasing complexity and the need to platoon the energies of multiple actors.

The pedagogies we adopted, captured for this paper under the headings *walking the city*, *hearing the city* and *reimagining the city*, were intended to supplement more conventional techniques of understanding context – namely mapping the city from afar.

Given the complexities of Delft and our entry point for the studio, we soon realised that the cartographic – the view from above (both in terms of height and power relations) would not adequately describe urban conditions in Delft. So, while it was still necessary to map the city as a physical construct, we extended our inquiry to use other forms of research that ascribe value to the view from the ground – the everyday, lived experiences and initiatives of local agents. By emphasising the view from the ground, the studio challenged the concept that cities are static objects and abstract sites for set design interventions.

The techniques that we explored were explicitly intended to foster co-production; to disrupt the implied hierarchies between so-called experts (architects) and their clients (ordinary people); and to provoke new readings of space – grounded in the prosaic everyday as well in provocative imaginaries. The studio was seen as a highly collaborative venture that would be strengthened by inputs, partnerships and engagements with a diverse range of urban actors.

At no stage was the studio conceptualised as a charitable intervention in an underprivileged environment – and hence a reaffirmation of skewed and asymmetrical power relations.

The studio started out with a series of lectures by various experts from *outside* the field of architecture. These lectures were intended to provide students with tools to understand the socio-economic context of Delft. Students were given input on the economic history of the Western Cape¹⁰; property economics¹¹; informal trade¹²; and on the planning of Delft¹³. We also partnered with post-doctoral researcher Suraya Scheba, based at UCT's African Centre for Cities, who shares our interests in Delft¹⁴ to provide our students with an understanding of ethnographic research as a means of illuminating contemporary social realities. Most significantly, we worked together with local activists from the Delft community – Ashley Louw¹⁵, Bahia Claasen¹⁶ and Vusisizwe Mpu¹⁷ – who provided a critical perspective based on their embodied knowledge of Delft as a community and place. These collaborations included the preparation of field work and studies in the field as well as participation in reviews of work presented at the university.

WALKING THE CITY

The supporting lectures were accompanied by two organised field trips, jointly conceptualised with the Delft

activists. Students engaged in two activities – walking and shopping. Students walked the site twice as a class¹⁸ – firstly at midweek during the middle of the month to observe the urban everyday, and on a second occasion, on a Saturday at the start of the month to observe the heightened retail activity along the main shopping spine. Walking allowed students to enter into casual discussions with local residents, to observe space from up-close, and to experience Delft at the pace that local residents experience the neighbourhood – particularly in a context where very few residents have cars.

As theorised by urban thinker Michel De Certeau in his “Practice of Everyday Life”¹⁹, the walker moves in ways that are never fully determined by the plans of organising bodies, taking shortcuts in spite of the strategic grid of the streets laid out by the state. Walking thus echoes the everyday life for today's residents who operate ‘tactically’ poaching on the territory of others and creatively reinterpreting the rules. Similarly Walter Benjamin's *flâneur*, through the act of strolling, is able to glimpse alternative histories and illuminate the present in new and interesting ways.

WALKING ALLOWED STUDENTS TO ENTER INTO CASUAL DISCUSSIONS WITH LOCAL RESIDENTS, TO OBSERVE SPACE FROM UP-CLOSE, AND TO EXPERIENCE DELFT AT THE PACE THAT LOCAL RESIDENTS EXPERIENCE THE NEIGHBOURHOOD – PARTICULARLY IN A CONTEXT WHERE VERY FEW RESIDENTS HAVE CARS

By encouraging the act of walking, we challenged our students to become engaged witnesses, acutely attuned to the particularities of the place.

For the purposes of recording their impressions from the walks, students were divided into four groups, each tasked with documenting a particular theme:

- retail activity;
- the location and spatial dynamics of institutions (large-scale public institutions such as schools, clinics, sports facilities as well as smaller private institutions such as tent-churches, mosques and madrasahs);
- the large-scale natural and man-made systems (such as topography, geology, hydrography, transport and engineering infrastructure) that connect or divide the settlement; and
- the way in which housing had been adapted.

Mapping the housing in particular involved a combination of tools, including: ➤



2: Masters student Kayla Brown's housing proposals: Rental housing on the left and a new housing type on the right, explicitly designed to accommodate user-initiated additions such as rental rooms and home businesses. The new housing contrasts with the existing low-density suburban environment that is a characteristic of Delft.

3: Figure-ground map of a portion of Delft South Main Road showing the public realm formally shaped by primarily private residential accommodation. The northern end accommodates a public library, multipurpose recreational hall and supermarket; the southern end is anchored by the local clinic and a high school. The main open market area, taxi rank and first primary school in the area are located at the centre.

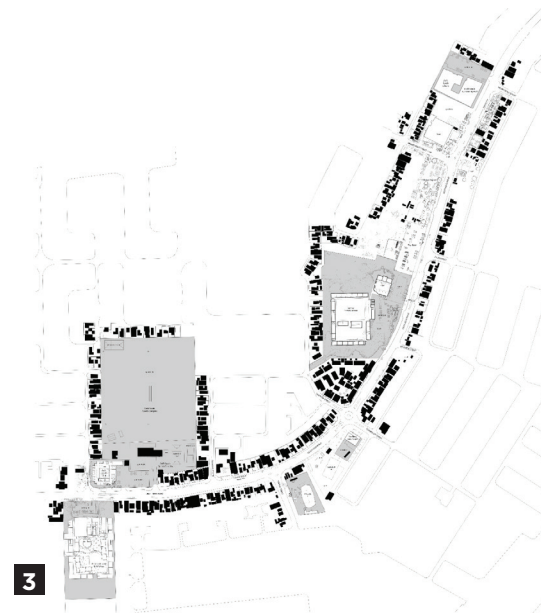
- tracing the changes in built fabric and urban morphology by using time-series aerial images;
- identifying and locating the different state subsidy housing models and comparing their different features and responses on the ground;
- observing and recording patterns of inhabitation;
- understanding patterns of use through semi-structured interviews with residents; and
- analysing the locational features of different self-initiated income-generating initiatives.

A nuanced understanding of housing conditions in Delft informed masters student Kayla Brown's dissertation proposing new forms of housing including a new housing typology explicitly designed for ongoing, user-initiated alterations to accommodate additional rental rooms and home businesses.

Students produced innovative drawings, capturing insights from afar (the cartographer's gaze) as well as illustrating more detailed impressions observed from up-close. Scales of observation ranged from the metropolitan scale, down to the illustrations showing the relationship between a hairdresser and her client. The class collectively assembled a 1:500 figure-ground map, measuring 2m by 3m, showcasing the diverse spaces and activities arrayed along the main road on public, semi-public, semi-private and private land, generating the beginnings of a Nolli²⁰ map for the contemporary South African city.

Students discovered how institutional uses attract informal retail activities. Traders cluster in the vicinity of schools and clinics. Students observed that to contribute to the economic vitality of the neighbourhood, institutional buildings could be envisaged as hybrid typologies, accommodating both state-sponsored programmes as well as private economic activity.

Informed by his observations of the many people engaged in a vibrant local light-manufacturing sector (burglar bars, furniture, car repair), honours student

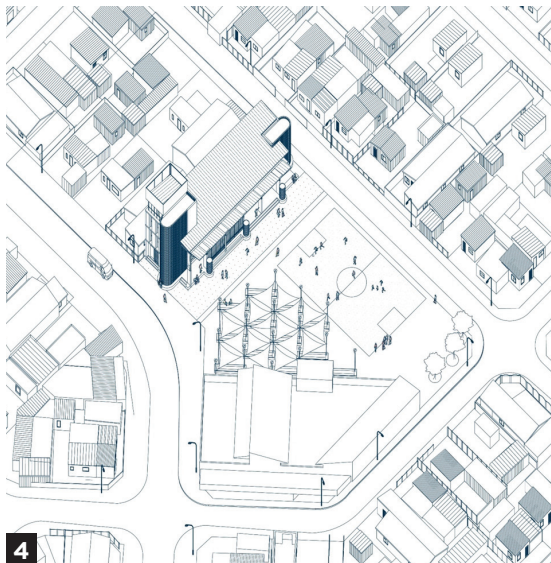


Warren van Niekerk envisaged a new vocational training college within the main informal trading space of the neighbourhood. His design proposition imagined the formal institution co-existing easily with, and forming a backdrop to, existing informal practices on the site, while also contributing a necessary civic scale in an underserved and undifferentiated low-rise environment.

The shopping activity was explicitly designed to provoke a more intimate engagement with place, to force students to transact eye-to-eye, one-to-one with local traders. The shopping brief argued that unlike more conventional processes of research "which create hierarchies between the observer and the subject who is being observed, shopping is an activity which undermines hierarchies, levelling out the relationship between supplier and consumer"²¹. Students were asked inter alia to interrogate "the nature of the exchange between themselves and the seller; the nature of the place where the exchange took place; the locational attributes of the place of exchange; and the extent to which the exchange was mediated by space". Students were then asked to exhibit their purchases and to create an interpretive drawing/illustration/artwork/collage capturing the nature of the transaction. On the basis of this engagement with traders, students identified a variety of retail typologies, their locational attributes and the extensive network of trading linkages that connect Delft to the region.

HEARING THE CITY

In addition to the valuable inputs we heard on our walks through the neighbourhood, we also held an architectural workshop at the local library designed to share and gain insight on how school children experience and use space in Delft South. This programme was facilitated both by the principals of the participant schools as well as local teacher representatives. Upending



the implied hierarchy of masters vs. honours students, the honours students were put in charge of the workshop and asked to devise a series of fun activities for Delft scholars aged between 12 and 14. The UCT students conceptualised five games to probe five specific research areas: sport; housing; navigating the settlement; children's daily routines; the natural environment; and gardens in the settlement.

The workshop provided extraordinary rich information about how children perceive space in Delft. We discovered zones of the neighbourhood that are avoided by children because of gang violence. We also discovered the extent of connectivity provided by the main road, which is an armature not only for trade and transport, but also provides links from one school district to the next. We discovered that during after-school hours, children move from one neighbourhood park to another rather than confine their activities to one particular place. On the basis of insights gleaned from the workshop, a number of students adopted spatial strategies based on how children use space in Delft.

Masters student Anees Arnold located his dissertation inquiry on three neglected open spaces arrayed along a connecting route used by scholars after school. Each of the three sites was activated through the addition of much-needed programmes – homework rooms, sporting amenities, laundries, carwash facilities, caretaker accommodation – but also visually linked together by a vertical tower that provides a way-finding element from one open space to the next.

REIMAGINING THE CITY

Although students were inspired by the depth of engagement, they were simultaneously overwhelmed by the enormous challenges confronting the settlement and the everyday demands of the here and now. We therefore decided to introduce an activity that would invite new,



4: Masters student Anees Arnold used his findings from the scholars' workshop to inform an architectural strategy to activate three neglected open spaces in the area. He devised a network of interventions that respond to the way in which children move from park to park during after-school hours.

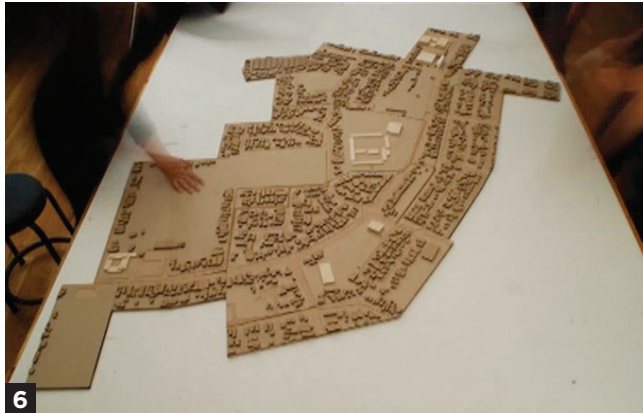
radical imaginaries for what Delft could become. The brief for this component of the studio asked students to critically interrogate Delft's evolving urban dynamics: housing fabric that is rapidly being altered and densified through additions and alterations and demolition and rebuilding; the emergence of cultural and educational amenities within the domestic fabric; excessive peak demand on existing public institutions etc. and then radically reimagine how the area might change in the context of three imagined urban futures:

1. The well-endowed state/city – the Just City.
 2. Mass densification (including radical in-migration) – Hyper Urbanisation
 3. State abandonment – the Self-Organised City
- By manipulating important variables such as density; security; land use; the natural environment; building footprint; symbolism; transport; economic conditions; and property speculation, etc. students were asked to model these alternative urban futures through a stop-frame animation film demonstrating how these futures would unfold – both in terms of built fabric and in terms of the number of urban actors required to realise the vision. The purpose of this exercise was to challenge students to imaginatively and provocatively consider social relations of power and their design implications.

5: The interactive workshop sought to understand some of the everyday lived routines of experiences in Delft South including the routes of children going to school and their activities after school, as well as how they imagined what open spaces could become.

WE DISCOVERED THAT DURING AFTER-SCHOOL HOURS, CHILDREN MOVE FROM ONE NEIGHBOURHOOD PARK TO ANOTHER RATHER THAN CONFINE THEIR ACTIVITIES TO ONE PARTICULAR PLACE

Inspired by one of the radical scenarios that explored the insertion of tower blocks into the predominantly single-storey environment of Delft, Alexandra Swartz explored the possibility of increased density by exploring a vertical housing typology. Unlike conventional tower-block models, which are often separated from the ground, her design sought to activate the ground-floor ➤



6&7: Images from the stop-frame animation film, including the existing built form characterised by mainly single-storey buildings, the vertical, and self-organised scenarios.



plane through the inclusion of public amenities. The project offered a range of public spaces including semi-public social areas on some of the upper floors to be shared by residents of the building.

LESSONS FROM OUR STUDIO

The first cycle of the Space of Good Hope (SoGH) studio has produced mixed results. On the one hand, the enormous amount of energy devoted to researching the socio-spatial dynamics within Delft South has meant that across the academic semester, less time was available for the design of an architectural artefact. The honours students' individual building designs were not fully developed. On the other hand, all students gained insights and acquired forms of knowledge about the contemporary South African urban condition, which would otherwise have remained inaccessible. The masters students, who had a full year to develop their

respective projects, were more successful in mobilising these new forms of knowledge. Some of the masters students succeeded admirably in generating designs that make an important contribution to the contemporary South African city.

Importantly, the studio demonstrated the necessity of having to co-produce *from the ground*. As a critical pedagogy, the tools of walking, hearing and radically imagining challenged singular and temporally static observations and design thinking. As tools to explore the field, they offered the beginnings of a grounded learning experience as well as opportunities to engage the complex dynamics of the contemporary urban condition. In doing so, we explicitly sought to shift the focus of design from a preoccupation with the architectural object, to one where buildings and spaces are designed to accommodate future appropriation by the needs of a predominantly domestic economy. ■

¹The 'vertical studio' comprised nine BAS (hons) students and 11 M.Arch (prof) students. Honours students participated in the studio for a period of one semester, whereas masters students participated for a full academic year.

²The title of the studio was inspired by Jonny Steinberg's book *A Man of Good Hope* (2014). The opening chapter of the book is set in Blikkiesdorp, which is located on the western edge of Delft South.

³Delft was originally established as an Integrated Serviced Land project. It is situated about 34km east of Cape Town, and about 7.5km south of Bellville. It was established as one of Cape Town's first mixed-race townships, accommodating both Coloured and African residents. According to the 2011 census, Delft was 51% Coloured and 46% Black African with 3% 'other'. The dominant first languages are Afrikaans and Xhosa. Official unemployment levels are at about 43% (although unofficially, this might be much higher). Much of Delft consists of government housing projects. The newest projects are located along Symphony Way and form part of the N2 Gateway Pilot Project. The area accommodates two Temporary Relocation Areas (TRAs), Tsunami and Blikkiesdorp.

⁴Asef Bayat (1997) "Un-civil Society: The politics of the 'informal people'" *Third World Quarterly* 18:1.

⁵Ibid.

⁶Crysler, CG. (1995) "Critical Pedagogy and Architectural Education in Journal of Architectural Education" (1984-), Vol. 48, No. 4 (May, 1995), pp. 208-217. Published by: Taylor & Francis, Ltd. on behalf of the Association of Collegiate Schools of Architecture, Inc. Stable URL: <http://www.jstor.org/stable/1425383> Accessed: 08-07-2016 15:17 UTC.

⁷Dutton, TA. "Design and Studio Pedagogy" *Journal of Architectural Education* (1984-), Vol. 41, No. 1 (Autumn, 1987), pp. 16-25, published by: Taylor & Francis, Ltd. on behalf of the Association of Collegiate Schools of Architecture, Inc. Stable URL: <http://www.jstor.org/stable/1424904> Accessed: 08-07-2016 15:20 UTC.

⁸See Abdou Maliq Simone "For the City Yet to Come: Changing African Life in Four Cities" (2004); *People as Infrastructure: Intersecting Fragments in Johannesburg* (2004).

⁹See Edgar Pieterse "Grasping the unknowable: Coming to grips with African urbanisms" (2011).

¹⁰Francis Wilson (School of Economics at the University of Cape Town).

¹¹Francois Viruly and Rob McGaffin (School of Construction Economics and Management).

¹²Caroline Skinner (African Centre for Cities at the University of Cape Town and

Urban Policies Research Director for the global action-research-policy network Women in Informal Employment: Globalizing and Organising (WIEGO); and Paul Williamson (Service Co-ordinator Business Areas Management: Economic Development City of Cape Town).

¹³Martin Hutton Squire of MLH Architects and Planners, responsible for planning of Delft for the Western Cape Provincial Government.

¹⁴Suraya Scheba is a post-doctoral fellow at The African Centre for Cities. Her empirical project focuses on processes and practices of informality through tracing everyday relations and flows (of materials, infrastructure, people, money) through Delft and larger geographic spaces. She is interested in researching informal trade (household enterprises and street-trade); the construction and use of rental apartments; and life histories of individuals/households in Delft.

¹⁵Ashley Louw, a former resident of District Six, has lived in Delft for the last 18 years. He has been involved with Delft Concerned Residents, an organisation tackling housing issues in the area; with the Right to Know Campaign; with the Bellville Homeless People Organisation; and with the Oasis Special School, for children who have special-education needs. He is a committed activist in promoting community participation and government transparency, particularly with respect to the allocation of housing.

¹⁶Bahia Claassen moved to Delft from Mitchell's Plain in 1992. She was one of the evicted families living on Symphony Way for two years until she was allocated a plot, having spent 35 years on a housing waiting list. She has served on the Delft Housing Committee for the last six years, helping people with their housing problems and ensuring that self-help schemes are fairly administered. She has also worked with the Western Cape Anti-Eviction Campaign, The Right to Know Campaign, and the Alternative Information Development Centre. Claassen is currently helping residents in her immediate neighbourhood lobby for some land to develop a crèche and community centre. She places high value on living in an area with a diverse population.

¹⁷Vusisizwe Mpu.

¹⁸Students also returned to the site on other occasions, in less structured ways.

¹⁹de Certeau, Michel. (1984) *The Practice of Everyday Life*, University of California Press, Berkeley

²⁰Giambattista Nolli produced a map of Rome in 1748 which showed enclosed social spaces such as churches etc. as part of the public realm.

²¹Fadly Isaacs and Melinda Silverman (2016) Space of Good Hope project brief.

TOWARDS A NEW ARCHITECTURE SCHOOL

Positioning Namibia's first school of architecture
theoretically within its post-colonial context.

BY: PHILLIP LÜHL, NAMIBIA UNIVERSITY OF SCIENCE AND TECHNOLOGY

ABSTRACT

Architectural education has on several remarkable occasions been the locus of radical change, usually in the wake of deep social transformations. In post-independence Namibia, *decolonisation of space* has not been the subject of much debate. The architectural profession remains elitist, skewed in race and gender and largely disjointed from the everyday realities of the majority of ordinary citizens who often lack the most basic aspects of a dignified living environment.

With Namibia's first undergraduate architecture programme established in 2010, the question arises how it situates itself theoretically within this post-colonial context, as well as within the wider debates on architectural education and how that might inform pedagogy. This paper reflects on how, through curriculum review, the school positions architecture as a critical response to prevailing socio-spatial challenges and the architect as co-producer of space within a complex field of social, technological, economic and political dynamics.

KEY WORDS:

- Namibia
- decolonisation of space
- representativity
- architectural education
- curriculum

INTRODUCTION

The opportunity to establish a new architecture programme, especially if it is the first one in a country, does not appear often and it bears particular opportunities and impediments. This paper attempts at post-rationalising the development of the undergraduate architecture programme at the Department of Architecture and Spatial Planning at the Namibia University of Science and Technology. By reviewing various influences that played out in the establishment of the programme, the author aims to provide a tentative basis to nurture further discussion on the school's pedagogic approach, and to position it within a wider >

THE ARCHITECTURAL PROFESSION REMAINS ELITIST, SKEWED IN RACE AND GENDER AND LARGELY DISJOINTED FROM THE EVERYDAY REALITIES OF THE MAJORITY OF ORDINARY CITIZENS WHO OFTEN LACK THE MOST BASIC ASPECTS OF A DIGNIFIED LIVING ENVIRONMENT

regional and international debate on transformation of architectural education.

The paper first traces Namibia's colonial socio-spatial legacies to contextualise the relevance of the architectural profession in post-colonial transformation processes. It then provides an overview of western (or northern) models of architectural education and their variegated implementation in South Africa, which has the most established architecture schools in the region, and from which Namibia continues to borrow in many fields. A brief overview of the institutional context in which the programme was established follows. The paper concludes with presenting how these four thematic lenses informed the transformation of the Namibian curriculum, and what still remains to be done.

THE OPPORTUNITY TO ESTABLISH A NEW ARCHITECTURE PROGRAMME, ESPECIALLY IF IT IS THE FIRST ONE IN A COUNTRY, DOES NOT APPEAR OFTEN AND IT BEARS PARTICULAR OPPORTUNITIES AND IMPEDIMENTS

NAMIBIA'S UNCONTESTED COLONIAL SOCIO-SPATIAL LEGACIES

In the 1950s and '60s South Africa consolidated its apartheid policies across the entire territory of Namibia – then South West Africa – building on legacies of the earlier German colonial occupation. Modernism, inseparable from the colonial project (Friedman 2000; Heynen 2005; Lühl 2012a), meant that architecture and spatial planning played a central role in establishing geographies and structures of control, often under the poor disguise of development. Today, inequalities resulting from this deep political, economic, social and territorial restructuring are not only still very present, but arguably continue to be reproduced, not least by the uncritical perpetuation of the modernist planning paradigm. This particular form of uneven geographical development (Harvey 2006) creates standards of living comparable with Scandinavian countries for some, who are seamlessly integrated – both socially and

spatially – into a global economy. For the great majority of Namibia's citizens, however, this first world bubble remains inaccessible (Delgado and Lühl 2013). While architecture remains at the service to this formalised economy, many people have to make ends meet in the spaces that are left unstructured, often uncritically referred to as informal. The informal is often perceived as an anomaly within a linear urbanisation process, as space waiting to be substituted by formal, or what Vanessa Watson sarcastically calls “proper” development (Watson 2003). However, as suggested by AlSayyad (2004), from a historical perspective “the formal” is the new mode, most patently represented by the introduction of private property under colonial rule, and its consolidation remains incomplete and perhaps incomplete-able.

Tellingly, the pervasive spatial legacies that stem from this process are not directly addressed in the Namibian constitution of 1990. Private property remained sacrosanct and no ancestral claims for land were entertained; this laid the ground for cementing the status quo. Article 23 of the Namibian constitution makes reference only to social, economic and educational aspects of historical inequality (Namibia 1990) and scantily mentions spatial issues related to land, housing and urban development, which continue to shape the everyday experience of social inequality. Not unsurprisingly, during the first 20 years since independence, space and its relationship to decolonisation has not been the subject of much public debate, with government focusing more on a “quantitative than a qualitative approach” towards undoing socio-economic discrepancies (Marley Tjitjo quoted in Lühl 2012b). Unlike in South Africa, where after the fall of apartheid, new positions emerged from the prioritisation of types of actions over form. Architects lost their position of “speaking on behalf of” and had to embrace a new relationship of architect and client as one of negotiation. Architecture emerging from such space of negotiation was based on flexible strategies, processes and materials; including different “ways of seeing the social and spatial landscape” (le Roux 1998). “Undisciplined practices”, le Roux argues, thus emerge from following paths of new users of space, with form being the resultant of the negotiations along the way. She expressed the hope that this will bring about liberating architecture through which the “roles of race, gender and cultural affiliation in the shaping of space would be shaken up” (ibid 1998). While the practice of architecture

might have transformed in relation to political and social change in some instances, the question for educators remains how such new practices are accounted for within the education of future architects and if they lead to new disciplinary knowledge, new spaces and urban environments that are rooted in the contingencies of a post-colonial order.

ARCHITECTURE AND SOCIAL RELEVANCE

The pioneers of the CIAM (*Congrès Internationaux d'Architecture Moderne*) framed their founding manifesto of 1928 in terms of the architect's professional obligations towards society (Conrads 1970). However, as de Carlo succinctly criticised already in 1969, the modern movement with all its formal commitment to social causes ultimately propagated elite cultural and aesthetic codes. The alignment of architects with the worldview of those in power – because of their dependence on money, land and authority to pursue their practice – permitted architects to simply provide answers to pressing questions or capitalist development by developing ever more (cost-)efficient solutions to urbanisation and housing, ultimately contributing to increasing spatial segregation of classes (de Carlo, republished in Blundell-Jones, Petrescu, and Till 2005). Blundell-Jones et al. argue that modernisation has meant “removing people from decisions” and led to their alienation, analogous to the emergence of representational democracy (Blundell-Jones, Petrescu, and Till 2005).

Yet, such critiques are not relics of the 1970s, if at all they are more relevant today. After those volatile years, which allowed for much experimentation around the world, the rise of neoliberalism entrenched architecture's service to capitalist production of space. Mainstream architecture largely retreated into its autonomous realm, thriving on formalism and global fashions and giving rise to the starchitect. Representations of architecture in mass media exacerbate the general public's engagement with architecture solely on the aesthetic dimension, which renders them passive consumers rather than “active doers and makers” (ibid 2005). A distance between the architect and the general public is thus created and maintained.

The Namibian experience confirms some of the above issues. Twenty-seven years after independence, the architectural profession in Namibia remains profoundly stratified in terms of race and gender. Of the 131 registered architects in Namibia (July 2015) only about 22% are female and 75% are white. Among the 60% of all architects that are Namibian nationals, numbers are even starker: 85% are white (Namibia Institute of Architects 2015), contrasting with national demographics where whites make up only 7% of the overall population. Beyond race, the social disjuncture between the architect as professional and the majority of ordinary citizens is most clearly signified in the discrepancy between

government gazetted minimum fees for professional architects, currently at R1 577.23 per hour (Republic of Namibia, Ministry of Works and Transport 2016), versus the minimum wage of a construction worker, currently at R14.59 per hour (*The Namibian* 2016). As this gap is furthermore spatially articulated in the apartheid geography of Namibian towns and cities, parallel worlds continue to exist and are seldom transcended¹. Given these historical inequalities related to race and gender, the profession continues to retain western value systems related to elite interests. While professional architects largely thrive on public commissions for an expanding state apparatus (Maritz 2012), they hardly feature in critical debates on urbanisation and the housing crisis, and other developmental questions that are of prime relevance for the majority of the population. The question of diversity and representativity within the profession must thus be central to the endeavours of architectural education in this context, with a prime focus on enabling equal access to and success in education.

DURING THE FIRST 20 YEARS SINCE INDEPENDENCE, SPACE AND ITS RELATIONSHIP TO DECOLONISATION HAS NOT BEEN THE SUBJECT OF MUCH PUBLIC DEBATE, WITH GOVERNMENT FOCUSING MORE ON A “QUANTITATIVE THAN A QUALITATIVE APPROACH” TOWARDS UNDOING SOCIO-ECONOMIC DISCREPANCIES

MODELS OF ARCHITECTURAL EDUCATION IN SOUTH AFRICA

Architectural education has a long history, and has developed over centuries into some of the prevalent curriculum models that are widely used today and remain in transformation. Carter (2013) traces three different structures of knowledge, curriculum and pedagogy in South African architectural education and their historical roots in European educational practices of the 18th–20th century: a “fine arts” curriculum dominated by studio-based instruction and emphasising individualised creative exploration, a “building arts” (*boukunde*) curriculum where building science subjects are actively integrated with studio work and emphasis on theory is reduced, and an “engineering with arts” curriculum strongly embedded in humanities and building science courses. These curricula derive from the long traditions of the art academy ▶

THE STUDENTS' DEMANDS FOR REPRESENTATIVITY AND DECOLONISED EDUCATION HAVE ONLY RECENTLY SHAKEN UP THE ESTABLISHED ORDER IN MANY SCHOOLS, AND THE DEBATE ABOUT TRANSFORMATION IS ONGOING

(École des Beaux-Arts) studio, the engineering academy (École Polytechnique) and the craft workshop.

With continuing professionalisation of architectural education, and the need for the state to regulate architectural education and the profession to safeguard public interest, some of these positions were synthesised into more structured curriculum models that were popularised through the RIBA and the Commonwealth since the middle of the 20th century. Carter distinguishes three such different types: a “compositional”, a “mathematical” and a “constructional” curriculum model and suggests that in South Africa these are best suited to architectural education at the university, university of technology and the comprehensive university respectively. This brief overview is useful to locate the establishment of the Namibian curriculum, and shed light on some of the incoherencies implicit in its development.

THE QUESTION OF DIVERSITY AND REPRESENTATIVITY WITHIN THE PROFESSION MUST THUS BE CENTRAL TO THE ENDEAVOURS OF ARCHITECTURAL EDUCATION IN THIS CONTEXT, WITH A PRIME FOCUS ON ENABLING EQUAL ACCESS TO AND SUCCESS IN EDUCATION

Yet, the curriculum only provides structure to what is taught and in which particular sequence (Carter 2008), leaving out social dimensions, such as demographics and pedagogic approaches of teaching staff and specifics about content and the space within which learning happens. As a programme in development, the evolution of the latter aspects is ongoing, based on experiential learning. Here, we are concerned more specifically how the Namibian curriculum draws from the different lineages, and how it relates to more widely accepted practices.

LOCAL INSTITUTIONAL PARAMETERS

Namibia's first school of architecture was founded in 2010 as an independent department under the School of Engineering, at what was then the Polytechnic

of Namibia. After the government approached the Polytechnic to establish an architecture programme, and pledged funding for its formation, including new teaching facilities, the Polytechnic approached the professional regulatory body, the Namibia Council of Architects and Quantity Surveyors (NCAQS), to determine the requirements and standards for educational programmes in architecture. While the regulatory body at the time, representing building industry interests, was primarily concerned with the training of much-needed technologists to keep up with the growing construction boom, the Polytechnic favoured a professional degree programme to educate future architects.

It was ultimately agreed to offer a three-tier professional degree programme: a three-year Bachelor of Architecture (B. Arch), followed by a one-year Bachelor of Architecture Honours (B. Arch Hons), and a two-year Master of Architecture (M. Arch). The first two degrees provide for the required architectural and senior architectural technologists, while the final degree permits registration as a professional architect after conducting a mandatory minimum two-year in-service training and passing a professional practice exam. The implications of treating the education of technologists as exit levels on the path towards educating professional architects remains a contested compromise (Wasserfall 2016).

An existing partnership with the Tshwane University of Technology (TUT) in Pretoria provided the basis to seek TUT's assistance in setting up the programme and led to the adoption of its four-year Bachelor of Technology (B. Tech) curriculum as a basis for further development (Wasserfall 2016). The B. Tech curriculum is rooted in the former Technikon model, aimed at educating technologists, and its structure was thus geared towards this aim. It included a semester of work-integrated learning as part of the first three years of study, as well as a large number of differentiated subjects, separate from architectural design studio. The first curriculum review in 2011 focused largely on the streamlining of courses and aligning them into a five-cluster structure, including design and environment, building technology, history and theory, professional practice and architectural communication and skills. Carter (2008) calls this process “recontextualising” of architectural knowledge from the field of practice with its inherent overlaps between building construction, design theory and precedent, design, documentation and presentation, and administration into distinct subject themes within the academic institution. This process

occurs both in the official sphere of statutory bodies concerned with the regulation of education and the profession, as well as in the academic sphere itself with its own institutional logic. He cautions that some of the discrepancies between practice and academia stem from this process and poses that interesting developments happen at the interface of these defined subject areas, opening up possibilities for rethinking pedagogy.

The NCAQS, faced with the situation to oversee the establishment of the first educational programme in Namibia, had submitted the TUT curriculum to the Namibia Qualifications Authority as curriculum framework, cementing its specific structure and content as the yardstick for any architectural programme in Namibia. This meant that the revised curriculum would be continuously measured against the TUT curriculum, limiting possibilities for introducing relevant knowledge fields to keep abreast with local and global dynamics. Proposed new courses, such as Housing and Everyday Life, African Urbanisation in Global Perspective and Environmental Technologies, were welcomed as relevant additions, but could only be assigned minimal space in the new programme thus minimising their impact on the overall education. In hindsight, many of these shortcomings can be attributed to the inexperience of various stakeholders in this process.

Furthermore, the founding team of teaching staff represented a wide range of architectural education backgrounds including from the UK, the Netherlands, Russia (Soviet Union at the time of studies), and a number South African universities adding another layer to negotiating the programme development. In the first few years, additional support was received from visiting professors from Aachen University of Applied Sciences in Germany, which has proven instrumental in setting up the first year studio pedagogy. The staff contingent has since doubled to 12 with about two-thirds being young white academics in their 30s and for the largest part educated in South Africa. Students' demands for representativity and decolonised education² have only recently shaken up the established order in many schools, and the debate about transformation is ongoing. Efforts to elaborate a distinct approach to pedagogy in Namibia need to be advanced and conscious of these current debates³.

Student intake for the programme is based on a three-step selection process, which focuses on academic performance (step 1), a selection test administered by the department (step 2), and final selection interviews (step 3). The selection test is designed to balance aspects such as geometric and three-dimensional understanding, technical understanding, freehand drawing skills, general knowledge, language and critical interpretation skills. This allowed the department to develop a balanced student body that is largely representative of the country's demographic and relatively balanced in terms of gender (figure 1), without the need to apply affirmative quota systems. Students also represent a broad socio-economic

Degree	B. Arch						B. Arch Hons	
Year	1		2		3		4	
Students	No	%m/f	No	%m/f	No	%m/f	No	%m/f
2010	18	61/39	-	-	-	-	-	-
2011	19	63/37	14	71/29	-	-	-	-
2012	22	50/50	17	65/35	10	60/40	-	-
2013	23	61/39	20	45/55	11	75/25	4	25/75
2014	23	57/43	23	56/44	16	44/56	5	60/40
2015	23	57/43	26	59/41	13	54/46	8	37/63

spectrum, ranging from children of high-level government officials to students from marginalised backgrounds, as well as hailing from urban and rural areas.

In 2016, and with a number of cohorts graduated at both exit levels, the programme underwent its initial validation by the local regulatory body. Aimed at more regional integration of architectural education, the NCAQS guidelines for validation were largely based on those of the South African Council for the Architectural Profession (SACAP), which in turn is aligned with those of the Commonwealth Association of Architects (CAA). The validation panel thus included academics and practitioners from South Africa and Botswana, besides NCAQS representatives and local architects. This comprehensive and critical external review of the undergraduate programmes confirmed many of the department's own views on shortcomings and opportunities for improvements. Specifically, the

Figure 1: Number of architecture students and gender distribution.



STUDENTS ALSO REPRESENT A BROAD SOCIO-ECONOMIC SPECTRUM, RANGING FROM CHILDREN OF HIGH-LEVEL GOVERNMENT OFFICIALS TO STUDENTS FROM MARGINALISED BACKGROUNDS, AS WELL AS HAILING FROM URBAN AND RURAL AREAS

large number of courses needed to be addressed as it was seen as leading to work overload for students and an increased fragmentation of learning. Overlaps and duplications needed to be reviewed; progression of learning needed to be streamlined; and more integration between subjects was required. Course clusters and content required review to develop a strong, locally informed and distinct theoretical position for the school. Similarly, architectural design courses needed to be developed in terms of a clear pedagogical build-up of learning outcomes over the semesters and of explicit integration with other theory courses (NCAQS 2016). ➤

THEORY COURSES, RATHER THAN FOLLOWING AN IMPLICIT WESTERN HISTORICAL CHRONOLOGY, WERE REDESIGNED TO EXPLORE SELECTED MOMENTS OF ARCHITECTURAL HISTORY AS A RESPONSE TO PREVAILING ENVIRONMENTAL, SOCIAL, CULTURAL AND TECHNOLOGICAL CONDITIONS, WITH AN INCREASED EMPHASIS ON THEORY ROOTED IN THE URBAN CONDITIONS OF THE GLOBAL SOUTH

Despite the recommendation of unconditional validation for both programmes, the validation thus provided encouragement for further review of the curriculum, now based on more rigorous external and internal scrutiny. The validation of the undergraduate programmes also allowed for the implementation of the two-year M. Arch programme that the department had developed in 2015 to enable graduates to become fully registerable professional architects.

SPECIFIC FOCI WERE PROVIDED FOR DESIGN STUDIO COURSES THROUGHOUT THE SEMESTERS, BALANCING BETWEEN DEVELOPING TECHNOLOGICAL SKILLS AND CRITICAL ENGAGEMENT WITH SOCIALLY AND ENVIRONMENTALLY RELEVANT ISSUES

The above contextualises four thematic lenses that allow situating the transformation of the Namibian architecture programme: the question of an architectural practice in a post-colonial context; diversity and representativity within the profession; historical roots of different architectural education models; and local institutional parameters within which the programme was developed. These four lenses have informed the further review of the curriculum carried out in 2016 and implemented in 2017.

From the beginning, and based on the compromise between the university and the professional regulatory body, the department shared a strong vision of balancing design and knowledge of construction in its programmes, tending towards the university of technology curriculum model. This vision provided guidance for the development of didactic studio project work, especially in the first year of study. However, the political dimension of space, especially in the post-colonial context outlined above, was only dealt with in between the lines of certain theory courses that touched on the role of the architect

and her or his possibilities to engage in socially-relevant critical spatial practice. Moreover, the question which epistemologies would form the basis of the necessary reorientation was not explicitly stated. During the recent curriculum review, theory courses, rather than following an implicit western historical chronology, were redesigned to explore selected moments of architectural history as a response to prevailing environmental, social, cultural and technological conditions, with an increased emphasis on theory rooted in the urban conditions of the global south. This aims to break out from an ossified, self-referential architectural and urban theory, and to explore a more situated understanding of architecture within a complex field of historical processes and their relevance to local and regional contemporary challenges. It also recognises the specific historical moment that Namibia finds itself in: namely, the turn from a largely rural population to a predominantly urban one. It is exactly this moment that allows for the re-evaluation of inherited socio-spatial paradigms, with questions of housing, urban livelihoods and increasing informalisation at its centre. It is these aspects that bear most potential for reviewing architectural practice, which in its conventional, consultant-based form is often not able to engage meaningfully with the needs and desires of citizens who find themselves outside of the established formal market economy. Actively engaging other audiences, other clients and other communities as part of the education will dismantle the notion of the architect as the expert problem-solver, and rather develop the notion of practices of spatial co-production. Specific foci were provided for design studio courses throughout the semesters, balancing between developing technological skills and critical engagement with socially and environmentally relevant issues. This topical focusing of semesters allows theory courses to be specifically directed towards supporting the concurrent studio course (figure 2), allowing assessment of elements of theory applied in the studio projects.

After starting out from didactic exercises on abstract space and structural understandings in semester 1, semester 2 explores the natural climatic and geographical context. Here, students are exposed to site and landscape, exploring the issue of elemental shelter informed by thorough exposure to a specific ➤

Bachelor of Architecture					
SEM	DESIGN	TECHNOLOGY	THEORY	PRACTICE	ELECTIVES
1	Architectural Design 1A <i>Space & Structure</i>	Applied Building Science*	Architecture in Context	Graphics & Communication	
2	Architectural Design 1B <i>Landscape & Environment</i>	Construction Technology 1*	Landscape and Context	Architectural Drafting	Vertical Studio 1
3	Architectural Design 2A <i>Tectonics & Detail</i>	Construction Technology 2*	Architecture and Discourse	CAD and Visualization	
4	Architectural Design 2B <i>Housing & Community</i>	Building Structures*	Housing & Everyday Life	Intro to Surveying & Mapping*	Vertical Studio 2
5				Work Integrated Learning	
6	Architectural Design 3 <i>Urban Context & Building</i>	Environment & Services*	Principles of Urban Design**	Computer Generated Imagery	Vertical Studio 3
Bachelor of Architecture Honours					
7	Honours Design Project 1 <i>Urban & Landscape Design</i>	Environmental Design & Technology	Research Methodology **	Construction Economics and Works Estimation	
8	Honours Design Project 2 <i>Heritage & Construction</i>	Integrated Construction Technology	Global South Urbanism **	Building Law and Contract Management	
Master of Architecture					
9	Integrated Design Studio 1	Adv. Building Construction			• Sustainable Materials Lab • Housing Design • Applied Urban Ecology
10	Integrated Design Studio 2		Appl. Research Methodology	Prof. Practice Management	• African Urbanism • Building Heritage & Conservation
11	Master Design Thesis		Critical Urban Theory		
12					

Figure 2: The curriculum structure after the second revision of the undergraduate curriculum undertaken in 2016.

*Shared with Quantity Surveying
** Shared with Town Planning

WHERE POSSIBLE, STUDENTS ARE ALSO EXPOSED TO INDIGENOUS ARCHITECTURE THAT HAS EVOLVED IN RESPONSE TO THE OFTEN-SCARCE CONDITIONS CHARACTERISING LARGE PARTS OF NAMIBIA. SUCH ENGAGEMENT WITH TRADITIONAL SPATIAL PRACTICES IS EXPECTED TO DIFFERENTIATE STUDENTS' UNDERSTANDING OF SPACE AND DWELLING FROM THAT ARTICULATED IN MAINSTREAM, WESTERN ARCHITECTURAL THEORY

rural area of the country through field excursions. Where possible, students are also exposed to indigenous architecture that has evolved in response to the often-scarce conditions characterising large parts of Namibia. Such engagement with traditional spatial practices is expected to differentiate students' understanding of space and dwelling from that articulated in mainstream, western architectural

ACTIVELY ENGAGING OTHER AUDIENCES, OTHER CLIENTS AND OTHER COMMUNITIES AS PART OF THE EDUCATION WILL DISMANTLE THE NOTION OF THE ARCHITECT AS THE EXPERT PROBLEM-SOLVER, AND RATHER DEVELOP THE NOTION OF PRACTICES OF SPATIAL CO-PRODUCTION

theory. Semester 3 engages deeply with construction materials and their intrinsic architectural expression from form down to detail scale, as well as the resulting spatial experience. Semester 4 introduces more firmly the social aspects of dwelling, and the relationship between the privacy of dwelling and the public realm at the neighbourhood scale. Given Namibia's acute and medium- to long-term housing crisis (Lühl and Delgado 2013), students are introduced to the aspect of collective and adequate housing, rather than expanding on the ubiquitous model of detached suburban housing, or essentialist conceptions of the individualised dwelling.

EXPANDING BEYOND SPATIAL URBAN DESIGN, THIS STUDIO ENCOURAGES STUDENTS TO THINK STRATEGICALLY ABOUT HOW SPATIAL DESIGN, WITHIN A LARGER FIELD OF URBAN PRACTICES, CAN MAKE A CONTRIBUTION TOWARDS OVERCOMING CONTEMPORARY URBAN CHALLENGES

After students spend semester 5 in architectural practices for work-integrated learning, the B. Arch concludes with a studio focusing on public buildings in an urban context with an emphasis on technical documentation. Countering low-density development along sub-urban design principles common to

Namibian towns, the imagination of denser and socially diverse urban environments is explored.

In the honours course, a studio introducing students to urban and landscape design follows on the introduction to the urban scale in third-year. This also provides a basis for students to explore opportunities for specialisation at masters level. Expanding beyond spatial urban design, this studio encourages students to think strategically about how spatial design, within a larger field of urban practices, can make a contribution towards overcoming contemporary urban challenges. The final studio of the honours course critically engages with heritage in the widest sense. Students are specifically encouraged to investigate heritage in a post-colonial context and its relation to the built environment. This aims to counter locally entrenched views that deem colonial buildings, and only those of German origin, as historically relevant. By prioritising one historical period over others, this view disregards pre-colonial architecture, more recent modernist heritage, developed mainly during apartheid times, as well as post-independence architecture. The prevalent focus on built heritage furthermore eclipses many forms of immaterial heritage as well as traditional spatial practices that continue to exist today.

CONCLUSION

Radical Pedagogies, a recent research project developed by Beatriz Colomina with PhD students at Princeton University School of Architecture, surveyed numerous cases of experiments in architectural education of the second half of the 20th century. The research team claims that architecture and architectural education have lost the radical touch of those years and that the best way to reinvigorate the profession is to revolutionise the way it is taught (Colomina et al. 2012). It is beyond the scope of this paper to dwell on the practical implementation of the ambitions contained in the curriculum described above, as those are still to materialise. Rather, the question was how does this new school position itself theoretically within its post-colonial context?

Clearly it is a work in progress, negotiating the structural constraints and the social incongruities stemming from the socio-economic stratification of the groups that are to effect transformation (i.e. students, staff, practitioners, regulatory bodies etc.). Yet, some aspects are clear. For architecture to become socially relevant to the largest number, it first has to recognise its current elite position. It needs to deconstruct its implicit value systems and actively engage with other views, communities and methods that are often regarded as external to the profession. A representative student body is only one, albeit important, step in this direction.

How do we educate young architects to be not only technically competent professionals, but also critical citizens able to question their role as professionals? While the work of deconstructing established bodies

FOR ARCHITECTURE TO BECOME SOCIALLY RELEVANT TO THE LARGEST NUMBER, IT FIRST HAS TO RECOGNISE ITS CURRENT ELITE POSITION. IT NEEDS TO DECONSTRUCT ITS IMPLICIT VALUE SYSTEMS AND ACTIVELY ENGAGE WITH OTHER VIEWS, COMMUNITIES AND METHODS THAT ARE OFTEN REGARDED AS EXTERNAL TO THE PROFESSION

of architectural and urban theory and rebuilding them from a situated understanding continues – and this itself is certainly the most long-term project – the type of projects assigned to students in design studios must reflect actual challenges that are relevant to society at this stage. Instead of seeing projects for informal economies, or housing upgrading and neighbourhood reblocking as developmental interventions, we have to realise that those will provide the mainstay of spatial practice in the future. Such projects require serious engagement with user communities and the development of methods and tools that go beyond

the classical disciplinary and representational techniques of architects to co-produce spatial interventions with others within a complex field of social, cultural, economic and political dynamics. ■

¹One of my first year students told me about his experience of studying first-year architecture while living in an informal settlement on the periphery of Windhoek. The realities of architecture school and the topics of studio projects could not be more removed from his own everyday life experience.

²For an example of specific demands, see the manifesto by the Black Student Caucus of the School of Architecture, Planning and Geomatics, University of Cape Town (2016).

³A group of Namibian students partaking in an annual architecture forum in Angola reported that their project for a housing intervention in an informal settlement in Luanda was criticised by the jury as “not African enough”.

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ACCESSIBLE ATTAINABLE ADMISSION TO ARCHITECTURE

Reflections on the processes of admission to the study of architecture in contemporary South Africa.

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ABSTRACT

This paper considers the processes by which applicants are admitted into undergraduate architecture programmes in South Africa. It questions the sustainability of these processes in our developing context and proposes ideas about how to possibly deal with this complex issue.

Most schools of architecture require as part of their application a portfolio or drawing test. Visuospatial requirements such as these are often prohibitive for applicants from impoverished environments. Schools in South Africa are challenged to increase accessibility without eroding architectural educational standards.

This paper proposes that we need to consider teaching for preparedness as well as testing for it. Using the theoretical backdrop of critical pedagogy and the writings of Freire, Salama, Weider, Goldschmidt, and others, this paper argues that teaching for preparedness is a viable medium-to-long-term option for schools of architecture to consider.

KEY WORDS:

- portfolio
- transformation
- diversity
- admissions
- architectural Education

INTRODUCTION

Schools of architecture have, over time, developed various procedures for the admission of students into their programmes. These have come about as a result of a general acknowledgement that secondary school grades are not sufficient indicators of preparedness for the study of architecture. Reflecting on earlier forms of architectural education systems shows that admission has always been a carefully considered process.

In South Africa, we are faced with another layer of complexity. Admission based on merit alone into architecture programmes has become virtually

impossible for applicants of all population groups (race and class). Due to the legacies and injustices of colonialism and apartheid, most prospective applicants in South Africa are far less 'prepared' for the study of architecture than their white counterparts who represent the minority in South Africa.

The challenge that schools of architecture thus face is to find ways in which we can make the study of architecture accessible and attainable for all, regardless of race or class, without eroding the quality of architectural education.

BACKGROUND

Professional programmes in architecture at universities the world over seem to be remarkably similar. For example, most teaching and learning occurs in the studio, and most assessments are conducted using the techniques of the pin-up review, and the 'crit'. While the culture of teaching and learning architecture is similar amongst many schools of architecture worldwide, it is quite unique when compared to other disciplines. Whereas a science degree might rely on mathematics and physical science taught in primary and secondary schools, or a degree in English literature assumes a proficient knowledge of the English language, an undergraduate degree in architecture cannot build directly upon any singular taught subject in secondary school; instead it draws on the cognitive styles and applied learning skills of its students.

It can be argued that a number of secondary school subjects provide sound grounding for architectural education. For example, a sound foundation of world history will provide a good basis by which to start understanding the history of global architecture. Likewise, a basic understanding of geography (including topography, climate and contours) will allow lessons of landscape and context to be better absorbed and incorporated into design education. The lessons in rational thought patterns that come from years of learning mathematics will help develop a rational design-thinking process, which will, in turn, inform design methodology. The scope and breadth of the discipline is wide enough to accommodate students who have studied and excelled in any number of combinations of subjects at primary and secondary school.

Most schools of architecture recognise and stipulate in their literature and prospectuses that the prior study of art or design is recommended, but not required. Despite this, all schools recognise the need for an admission assessment (by way of an assignment, or task, or portfolio, or design test) that shows an applicant's visuospatial skills. This seems to be a part of all admissions into architectural programmes, and also dates back to the first established schools of architecture: viz. the initial *École des Beaux-Arts* (which started in 1819), the 'modernist' Bauhaus (established a century later in 1919) and later the Vkhutemas in Russia (consolidated in 1920).

The establishment of these three schools marks important moments in the development of architectural education. It is thus important to understand their historical admission processes as part of the background to this study.

The *École des Beaux-Arts* was run as a collection of studios, known as *ateliers*, each with its master. To be considered for admission into the school of *ateliers*, prospective students had to undergo a six-month programme within a studio. If they performed well in a number of set tasks and exercises, they would be admitted as fully-fledged students¹.

The Bauhaus and Vkhutemas schools were set up in Germany and Russia just after the end of the First World War and the Russian Revolution respectively. In a time of optimism and in the spirit of rebuilding and healing the world, both of these avant-garde institutions broke away from the *Beaux-Arts* model to a certain extent. Here the focus was on developing and honouring the arts, design, crafts and architecture; design was now seen as something that should be for all, not just the aristocracy².

DUE TO THE LEGACIES AND INJUSTICES OF COLONIALISM AND APARTHEID, MOST PROSPECTIVE APPLICANTS IN SOUTH AFRICA ARE FAR LESS 'PREPARED' FOR THE STUDY OF ARCHITECTURE THAN THEIR WHITE COUNTERPARTS WHO REPRESENT THE MINORITY IN SOUTH AFRICA

The Bauhaus, keen to open its doors to all regardless of class or gender, was the first architectural school to require what would today be described as a portfolio: a collection of prior creative work. Like the *École*, all successful applicants were first admitted for a six-month trial period, during which time they took the preliminary course. Success in this course, along with a high degree of capability for independent work, would allow students to then choose which workshop (similar to the *atelier* (studio) of the *École*) they wanted to join³.

The Vkhutemas School of Architecture was established in 1920 in post-revolutionary Russia, during a time when all art education was being reorganised. In keeping with the 'classless' goals of the revolution, there were initially no admission criteria and all applicants were admitted. This soon had to change when it became clear that 'unscreened' admitted students could not cope with the basic course. From 1925 onwards, entrance examinations were held, where applicants' abilities in drawing, painting, modelling and technical drawing were tested⁴. ➤

Figure 1: Table (compiled by the author, based on available information online at the time of writing this paper) showing application requirements for undergraduate programmes at schools of architecture in South Africa and around the world.

	portfolio of prescribed tasks	unprescribed portfolio	national aptitude tests (eg. NBT)	national applications authority	12 years of schooling – points above 34	design test	interview	audition	mathematics 50%	geography	english 50%	physical science 50%	questionnaire	motivational essay	mathematics test	no specific subject requirements only that all subjects are passed	english literature	minimum academic grades on any/all subjects 75%	drawing test
University of Cape Town																			
University of the Witwatersrand																			
University of Pretoria																			
University of the Free State																			
University of Kwazulu-Natal																			
Cape Peninsula University of Technology																			
Durban University of Technology																			
University of Johannesburg																			
Nelson Mandela Metropolitan University																			
Tshwane University of Technology																			
KADK (Schools of Architecture, Copenhagen Denmark)																			
University of Sydney																			
University of Auckland																			
University of British Columbia (Canada)																			
All universities in Finland																			
The Bartlett (UK)																			
École des Beaux-Arts (as at present)																			
Escola Cidade Sao Paulo Brazil																			
Balwant Seth School of Architecture Mumbai India																			
Tongji University Shanghai China																			

ADMISSION INTO SCHOOLS OF ARCHITECTURE IN CONTEMPORARY TIMES

Most schools recognise that admission systems based on secondary school grades alone, without any evidence of the applicant's visuospatial abilities, cannot provide a sound prediction of design potential⁵. In a survey conducted by Goldschmidt et al in 2001, the applications processes of 79 schools of architecture around the world were compared. For the purposes of this study, I have compared the application processes of 10 South African schools of architecture as well as a random selection of schools in various global regions (North America, South America, Scandinavia/Europe, Australasia, India, and the UK).

All of the schools' prospectuses show a combined application process where, on average, two to three of the following factors are considered: secondary school grades, portfolio of prescribed work, unprescribed portfolio, a design test (done either at home or at the school), interviews, auditions, letters of motivation, an essay supporting their application, and architectural aptitude tests, as well as general national aptitude tests. (See figure 1).

In his article entitled "Skill-based/Knowledge-based architectural pedagogies: an argument for creating humane environment" (2005), Dr Ashraf Salama elaborates on the differences between skill-based and knowledge-based pedagogies in architectural education, and its admission policies worldwide.

Salama argues for the necessity for architectural education (and subsequently its admission policies) to include both skills-based and knowledge-based pedagogies, because to design human environments that are environmentally responsible and socially sustainable, students need to be equipped with the capacity to think artistically, in terms of drawings, models and making place, as well as theoretically, in terms of understanding and being able to think critically about socio-political contexts and challenges. The relationship to admission processes that he highlights is that most schools of architecture do not require entrance assessments that test more than visuospatial skills, and that this is needed in contemporary times⁶.

THE VALIDITY OF A COMBINED SCORE

Studies have shown that there is little correlation between academic grades in secondary school and performance in design programmes of architecture⁷. It does then make sense that most universities in contemporary times recognise the validity of a combined admissions requirement. At the University of Cape Town, evidence shows that the number of applicants admitted with high portfolio scores and lower academic scores is almost equal to that of the students admitted with very high academic scores and lower portfolio scores. (See figure 2). While scoring well on the portfolio score alone does not predict success, neither does scoring well on academic scores alone.

THE SOUTH AFRICAN CONDITION

In South Africa, there are peculiarities to the question of access to programmes of architecture that occur as a result of our historical condition. As happened in Europe and many of its colonies, until the early 20th century, appreciation for, and knowledge of, the arts in South Africa was predominantly reserved for the upper classes. In South Africa, this had racial overtones, as the ruling classes were white, and European. Despite this, there was a strong presence of arts and culture in indigenous, coloured, Indian, Malay and African black communities in colonial times. Some schools taught the arts to young people, and there are examples of creative work (be it poetry, painting, music and dance) from all parts of South African society throughout colonial times. It is however important to acknowledge that colonialism did use culture to oppress people.

MOST SCHOOLS RECOGNISE THAT ADMISSION SYSTEMS BASED ON SECONDARY SCHOOL GRADES ALONE, WITHOUT ANY EVIDENCE OF THE APPLICANT'S VISUOSPATIAL ABILITIES, CANNOT PROVIDE A SOUND PREDICTION OF DESIGN POTENTIAL

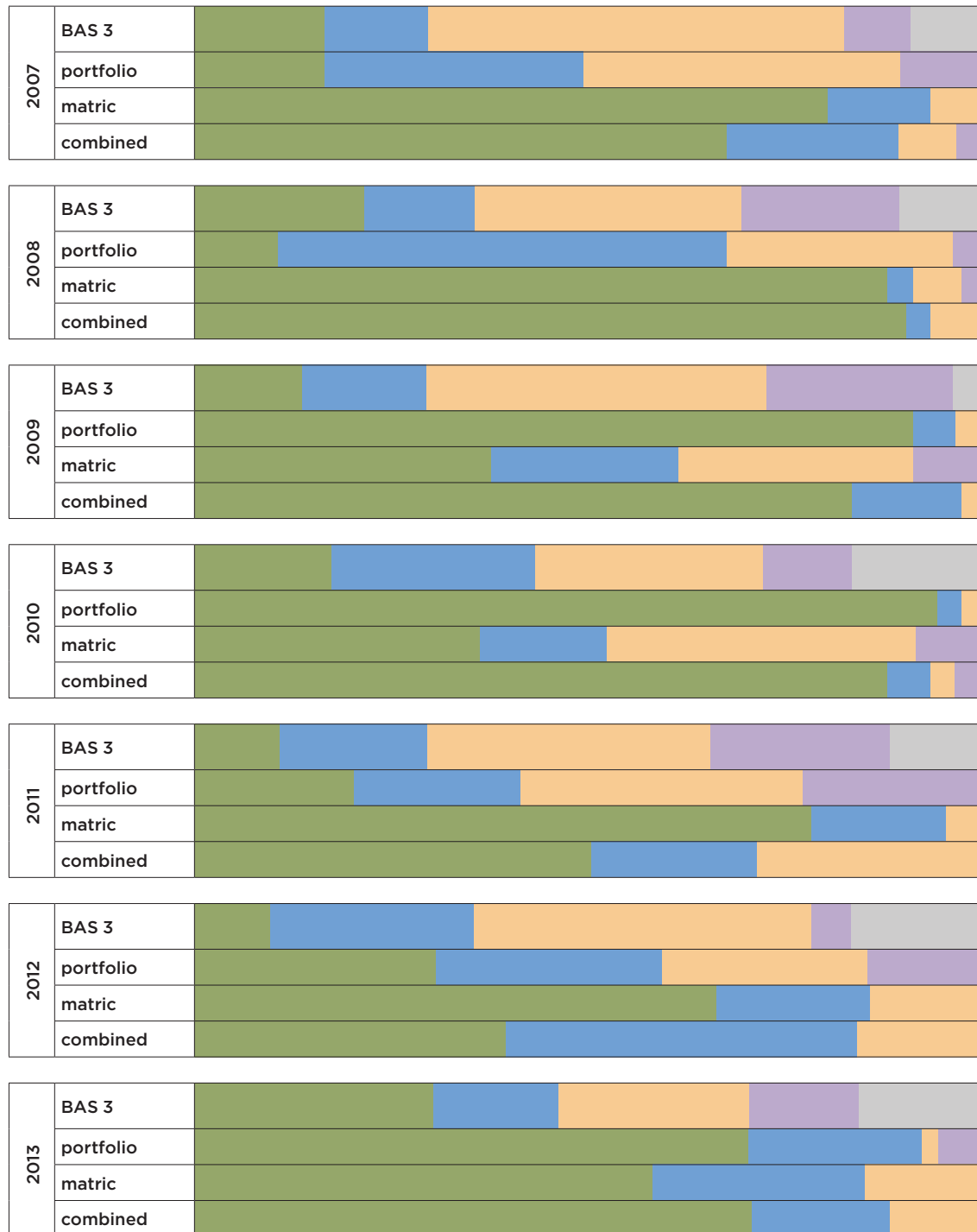
In his book *Culture and Imperialism* (1993), Edward Said writes of the connections between the arts, culture and imperialism. Said explains, through the use of much analysis and many examples, that all forms of culture, ranging from poetry to painting, were used to inculcate attitudes and perceptions amongst the oppressor nations, of superiority, and amongst oppressed peoples, of their inferiority⁸.

The formalisation and legalisation of segregationist discriminatory laws that came with apartheid from 1948 onwards brought a planned, phased and legalised deprivation of artistic education for people of colour in South Africa. Education was seen as a critical tool for controlling, subjugating and dividing South African society; as a result, the national systems of education were divided and stratified. White education was, of course, of the highest standard. Next was Indian education, then coloured education, and lastly, education for black African South Africans, known as Bantu education. Each of these sections of the education sector had their own governmental departments, their own budgets, their own rules, requirements and policies, their own schools, their own teachers, and they were also geographically separate.

As this divided system of education was being set up and formalised, so too was resistance to it. The results of 'dumbing down' large sectors of the population had ➤

Figure 2: Table showing portfolio scores, matric scores and final third-year design scores for incoming students from 2007 to 2013, as a percentage.

100–75
74–75
69–60
59–50
fail



not yet taken full effect, and many oppressed people (particularly school teachers) were able to see and predict the incredible injustice that was being carried out by the government.

In his article “They can’t take our souls: Teachers’ League of South Africa Reflections of Apartheid”, Alan Weider refers to the writings of IB Tabata in his

book *Education for Barbarism* (1959). Tabata was an insightful intellectual and one of the earliest critics of the apartheid government’s education policies. He wrote about how it created two kinds of teachers, those who actively protested and had the ‘fighting spirit’, and those who became psychologically enslaved, with what was described as a ‘slave mentality’⁹.

THE FORMALISATION AND LEGALISATION OF SEGREGATIONIST DISCRIMINATORY LAWS THAT CAME WITH APARTHEID FROM 1948 ONWARDS BROUGHT A PLANNED, PHASED AND LEGALISED DEPRIVATION OF ARTISTIC EDUCATION FOR PEOPLE OF COLOUR IN SOUTH AFRICA

Early anti-apartheid movements that started around the turn of the 20th century and into the 1920s were strongly influenced by international movements that sought to bring equality and justice to all. Ideological and intellectual links to anti-imperialist and anticapitalist movements internationally persisted well into the 1960s and '70s in the height of the apartheid years in South Africa. Paulo Freire, a Brazilian educationalist and philosopher, was particularly influential. Freire advocated for education to encourage critical thinking. The theory of Critical Pedagogy developed by Paulo Freire was seen as a vitally important philosophy, almost a lifeline, through which teachers could resist the oppressive and inhuman educational policies of the South African government¹⁰. Teaching students to think, to be critical, to be creative and have a worldview became lifelong commitments of a few dedicated teachers, many of whom belonged to organisations such as the Teachers League of South Africa.

This was, sadly, not the case for most of South Africa. And after decades of divided and stratified educational departments and policies, post-1994 South Africa has inherited a multitude of problems that cannot be fixed overnight. The 'dumbing down' of large portions of the population, which was after all the intention of the apartheid government, has been quite 'successful'.

THE HISTORY OF THE ADMISSIONS PROCESS AT THE UNIVERSITY OF CAPE TOWN (UCT)

The School of Architecture at UCT started the current system of admission in the 1980s. Up until the late 1970s, admission into the school had been based on a combination of secondary school grades and a portfolio of unprescribed creative work. Under the laws of apartheid, black, coloured or Indian applicants had to obtain special permission to study at a white university, but by the 1980s many of the apartheid laws were ignored as far as possible by the school. It was also at this time that the school acknowledged that its admission policy favoured white applicants over black, coloured and Indian ones because of the dearth of art education at secondary schools.

A carefully considered set of exercises was then set up to be part of the required portfolio of work. The idea was that if all applicants were required to do the same set of exercises, all applicants could be judged on the same basis. As a result of the prescribed portfolio, more

applicants from disenfranchised communities had a better chance of admission. There was a strong ethos and desire to make the study of architecture accessible and inclusive, without eroding quality.

The portfolio tasks were considered and set by the academic staff in such a way as to test for various levels of skill and potential amongst applicants in a range of areas. The instructions were:

1. Draw a manufactured object/or an animal.
2. Draw a portrait of a person.
3. Design a pattern based on the first drawing you drew.
4. Draw a journey from your house to your favourite place.
5. Write a letter of motivation.

These tasks are still part of the portfolio requirements today, but the precise wording and descriptions of the tasks has evolved. Currently there are two more tasks:

6. Design and make a lamp.
7. Design and make a poster advertising an event or issue you care about.

Together, all the tasks test for skills that are used as part of any design process. The set of tasks is not exhaustive, and the school reflects on the relevance and value of each of the tasks annually. Despite small changes in wording and emphasis, the fact that the set of tasks has basically remained the same for almost four decades is testament to its success together with academic scores in predicting performance among students.

OUTREACH WORKSHOPS

Due to the ongoing limitations of secondary education for most in South Africa, applicants from previously disadvantaged backgrounds still need to be admitted at lower levels of skill and preparedness if we hope to graduate architects of colour in South Africa in the short- to medium-term. Admissions based solely on merit would still, as recently as 2015, be predominantly white. As a result, the school has implemented and incorporated methods of differential access for applicants from disadvantaged backgrounds for the last 20 years or so. From 2011 to 2014, the annual intake of South African students into first year comprised 50% white and 50% black (including coloured, Indian, Chinese and African black) South Africans. From 2015 onwards, the school has tried to reach class ratios of 70% black South African and 30% white South African, although it has not been able to reach those figures due to the pool of applicants. ➤

In an attempt to increase the pool of good applicants from disadvantaged backgrounds, the school has hosted annual outreach workshops every year since 2005. Grade 11 and 12 learners, while being housed and fed at the university for three days, participate in a carefully planned programme that includes field trips, lectures by architects, visits to practices, general lectures, movies, and studio sessions. Learners are given a lot of information about the portfolio requirements, and the school targets learners from disadvantaged backgrounds that are doing well academically. On average, five of the incoming class every year since 2009 would have attended an outreach workshop when they were in either grade 11 or 12.

TEACHING FOR PREPAREDNESS

Despite considerable effort to increase the pool of eligible strong applicants with the outreach workshops, and its relative success, the annual intake of students continues to include an increasing number of weaker students. Since 2015, the first-year intake has increased from 65 to 85 students, and the school has undertaken to try to accept all of the additional 20 students from disadvantaged environments.

**THE RECOGNITION OF THE NEED
FOR ALTERNATIVE ADMISSION
STRATEGIES MUST ACKNOWLEDGE
THAT THE TEACHING AND
LEARNING METHODS EMPLOYED
IN ARCHITECTURAL EDUCATION
ARE DIFFERENT TO THOSE
THAT ARE PREDOMINANTLY
USED IN SECONDARY EDUCATION**

This means that each cohort is now made up of a large group (50–70%) of students who have entered at a significantly lower educational level than the white students in that cohort (who will constitute 30–50%). As a result, the school is starting to see a shift downwards in the general levels of performance of students, and the number of repeat students each year is increasing markedly.

While this may be attributed to the fact that class sizes and student-to-teacher ratios have increased, we must acknowledge that if we want to transform the demographics of the profession substantially, without dropping standards, we will have to investigate other options.

Perhaps a revisit of the admission processes of the *École des Beaux-Arts* and the *Bauhaus* might be helpful. While contemporary admission processes all test for preparedness, these early schools of design

and architecture actually **taught for preparedness**.

In the context of ever-decreasing standards of education in the secondary school education sector of South Africa, and in light of the psychological, material and cultural limitations of apartheid educational systems, it is unrealistic to think that the majority of school leavers in South Africa would have sufficient skill to compete with the privileged minority.

The School of Architecture at UCT has resisted the implementation of a 'foundation year' for some time. Where other departments at UCT have such programmes they do tend to be almost entirely comprised of black students. There is an obvious stigma attached to this, and these extended curricula do little to unite an already divided student body. The studio pedagogy has up until now been able to provide a good environment within which to teach students of different levels, and it has also always provided good opportunities for peer learning¹¹.

The pass rates at the UCT School of Architecture in the undergraduate Bachelor of Architectural Studies programme are still amongst the highest in the university; it would nevertheless be foolish to ignore the small but steady increase of repeating students. As we admit students at lower levels of preparedness there is ground to be covered in the studio and lectures that would have been unnecessary to cover years ago. Academics all over South Africa are challenged to find ever more inventive ways of teaching design, breaking it up into ever smaller components. A recent experiment with teaching the concept of 'scale' to first-year students at Wits bears reference¹². It is becoming clear that lessons in scale, drawing, thinking three-dimensionally, among others, will all take longer to teach and learn.

UCT has started to run a number of programmes with secondary schools in the greater Cape Town area that work with targeted high school students over a prolonged period. The "100UP" programme is one such example. Here, 100 learners from Grade 10 are identified and brought to UCT on a weekly basis for the last three years of their secondary education to receive extra tuition in mathematics and science subjects so as to improve their chances of successfully being admitted into tertiary programmes of study.

Schools of architecture in South Africa might benefit from having similar kinds of programmes. As opposed to having one or two three-day workshops with learners, this type of programme – **of teaching for preparedness** – could identify potential candidates from early on and work with them, teaching and supplementing their secondary education, to better their chances of success at tertiary study. In doing so, it could address some of the shortcomings of the secondary school system for a few. In an ideal world, such programmes would not be necessary, and the primary and secondary school systems still need substantial input and development if we have any hope of developing this

country. However, as an interim solution, a programme like this for prospective architecture students might be a way to increase the pool of eligible applicants.

The recognition of the need for alternative admission strategies must acknowledge that the teaching and learning methods employed in architectural education are different to those that are predominantly used in secondary education. A prolonged introduction to these techniques (such as proposed here) might help to increase the pool of eligible applicants. Schools of architecture recognise that architectural problems cannot be solved by employing only mechanistic ways of thinking¹⁴. More systemic ways of thinking allow for much more successful teaching and learning in the architectural school, where it is recognised that most learning occurs when the student teaches him or herself, or when students teach each other. Knowledge is gained and developed by a systematic and synthesising process of gathering knowledge, applying it, reflecting on it, and reviewing students' own applications of it. An early introduction to these methods of learning might help prepare applicants.

Another idea could be to implement a two-stage application process, whereby students are admitted for a preliminary year of teaching and learning and, where on successful completion of this year, students are then admitted into the BAS programmes as fully-fledged students. To avoid the associated stigma and divisiveness of a 'foundation year', which this system would be similar to, the entrance year could be a requirement for all applicants (not only those coming in at a lower level).

These are preliminary ideas and require much consideration in their development.

CONCLUSION

Research and experience have shown that admission into architecture programmes on the basis of academic grades alone is insufficient in predicting

preparedness. Since the very start of schools of architecture there has been an acknowledgement of this fact. Yet, we live in a country where the consequences of a discriminatory and deprived schooling system mean that most applicants will be ill-prepared for studying architecture.

While we investigate different ways in which we can secure success for architectural students, we also need to look at the admission processes. Are they really as accessible as they could be? Rather than increasing the cost to the student and the state because of many repeated years within the existing curriculum, we should perhaps look more carefully at ways in which we can help prepare students before they are admitted. An important way in which we can do this might be to teach for preparedness, rather than only test for it. ■

¹⁴Goldschmidt et al, "Who should be a designer?" Paper presented at Designing Thinking Research Symposium 5 at Delft University of Technology, 18–20 December 2001, proceedings edited by Peter Lloyd and Henri Christiaans, pp 277–295, 277

¹⁵Goldschmidt et al, "Who should be a designer?", p 279

¹⁶Hans M. Wingler, *The Bauhaus*, (Cambridge: MIT Press, 1978), 44.

¹⁷Goldschmidt et al, "Who should be a designer?", pp 280–281

¹⁸Nico Botes, "Knocking at the door", *Architecture SA*, November/December 2015, 39.

¹⁹Dr Ashraf Salama, "Skill-based/Knowledge-based architectural pedagogies: An argument for creating humane environments". Paper presented at 7th Intl Conference on Humane Habitate-ICHH-05 – The International Association of Humane Habitat IAHH, Rizvi College of Architecture, Mumbai, India, January 29–31, 2005 30.

²⁰AS Roberts, "Predictors of Future Performance in Architectural Design Education" *Educational Psychology*, 2007, 27:4, 448.

²¹Edward W. Said, *Culture and Imperialism* (London: Chatto & Windus Ltd, 1993), xiii–xiv

²²Alan Wieder (2001) "They Can't Take Our Souls: Teachers' League of South Africa" Reflections of Apartheid, Race Ethnicity and Education, 4:2, 145–166

²³Adhikari, M & Switzer, L, *South Africa's Resistance Press: Alternative voices in the last generation under apartheid*, (Ohio University Press 2000), 217.

²⁴Donald Schon, "The Architectural Studio as an Exemplar of Education for Reflection-in-Action", *Journal of Architectural Education*, (1984) Vol. 30, No. 1, 6.

²⁵Dr. Ariane Janse Van Rensburg, "Learning @ 1:1", *Architecture SA*, May/June 2016: pp 36–45.

²⁶<http://www.sii.uct.ac.za/sii/100up>

²⁷Dr Ashraf Salama, "Skill-based/Knowledge-based architectural pedagogies: An argument for creating humane environments". Paper presented at 7th Intl Conference on Humane Habitate-ICHH-05 – The International Association of Humane Habitat IAHH, Rizvi College of Architecture, Mumbai, India, January 29–31, 2005 31.

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ARCHITECTURE FOR ALL

Investigating strategies that existing schools of architecture can follow to facilitate the transformation of education.

BY: SANDRA FELIX

ABSTRACT

Our schools of architecture shape our cities, our architecture, our culture and our society by literally shaping their students. What solutions have universities implemented to facilitate the transformation of architectural education to address the post-1994 imperative, in terms of transformation of access, pedagogy and canon?

This essay seeks to understand both how this enculturation of students to become architects affects the students that find themselves outside of the dominant culture, and how the various strategies of transformation of the different schools of architecture have sought to both ameliorate the enculturation and access thereto of “outsiders” and, at the same time, also change that dominant culture.

Is race the predominant determinant of marginalisation of architecture students in South Africa, and can it be separated from gender, economic, cultural or educational background? Is it not that any student not part of the dominant culture of a school is an ‘outsider’ that is enculturated and assimilated.

KEY WORDS:

- transformation
- architectural education
- access
- canon
- pedagogy
- outsider
- schools of architecture

INTRODUCTION

Architecture for all, as an ideal, has driven the transformation of architectural education and access thereto in our universities since the inception of democracy in 1994.

To a large degree, our schools of architecture shape our cities, our architecture, our culture, and therefore society as a whole, by literally shaping their students. This shaping generally adds layers of the dominant architectural culture atop the students’ own culture through “contingencies, regulations, spatial organisations, pedagogic encounters etc. ... (and) work on students over a period of time to socialise and acculturate them into architects (Webster 2006).

This essay seeks to understand both how this enculturation of students to become architects affects the students that find themselves outside of the dominant culture, and how the various strategies of transformation of the different schools of architecture have sought to improve access to architectural education and ameliorate the enculturation of the ‘outsider’ students whilst at the same time transforming that dominant culture.

Can our schools of architecture transform post-1994 from a basis of a historically entrenched hegemony of a largely colonial and Eurocentric architectural culture or “are universities appropriate venues for schools of architecture” at all? (Lipman and Mills 1994)

This is precisely the question Mills and Lipman formulated in 1994 in their article on society and architectural education. Their conclusions and responses to this question were twofold. If these schools

continued with the same “theoretic formalistic” type of architectural education, then the answer to the question would be no, as such an education “entrenches rather than challenges established privilege”, but if architectural education within these universities could “reconstitute the unity in buildings of form and content ... architecture and society” and thereby literally discard the colonial imported models of education, then the answer would be yes. (Lipman and Mills 1994)

Low and Smuts’ 1997 study “A New school of Architecture in South Africa?” posited a similar question of whether a new school of architecture was the solution, or whether the existing schools could be transformed. The recommendations listed in the study entailed three possible strategies that existing schools could follow:

- Conflict – an aggressive adoption of action that is intended to provoke interaction and dialogue, but has the potential for conflict and alienation.
- Representation – establishment of a new platform for communication to create a common vision where differences can converge.
- Demonstration – establishment of an experimental programme to test actions.

In addition, the study listed three precise actions that should be addressed within the existing schools of architecture:

- Foundation courses that act as bridging programmes between inadequate schooling and university – especially directed at historically disadvantaged students.
- Graduate programmes that address the specifics of the African context and the post-apartheid condition.
- Bursary schemes for disenfranchised/black students. (Low and Smuts 1997)

Low and Smuts recommended the demonstrative position, as this would have the greatest potential to inform transformation.

The schools of architecture at existing universities appeared to follow that recommendation, and proceeded with a number of experimental programmes to test their efficacy in transformation agenda. The programmes, initiatives and strategies put into action echo those suggested in both the 1994 and 1997 studies:

- **Transformation of access** seeks to open up access to architectural education as well as access to the profession – by ensuring successful throughputs through the undergraduate and postgraduate degrees – to those previously excluded due to class or race and often both.
- **Transformation of canon** expresses the radical longing for a new architectural culture, which more closely reflects our social, economic and urban context.
- **Transformation of pedagogy** drives the changes required both in the demographic make-up of staff and in pedagogy practices to ensure improved success of students through the degrees which contribute to access to the profession.

TRANSFORMATION INITIATIVES

In architectural education, the transformation of access appears to have three main throughput blocks – access to undergraduate study, the large attrition rates of students from first to second year, and the attrition at the junction of the undergraduate with the postgraduate degree.

The first block to transformation of access is the entrance requirements for the undergraduate architectural degree. These entrance requirements historically relied on parameters that effectively served to exclude students from poorer foundational education backgrounds, and thereby maintained the overwhelmingly middle-class, white and mainly male demographics of student and staff as they were pre-1994.

ARCHITECTURE FOR ALL, AS AN IDEAL, HAS DRIVEN THE TRANSFORMATION OF ARCHITECTURAL EDUCATION AND ACCESS THERETO IN OUR UNIVERSITIES SINCE THE INCEPTION OF DEMOCRACY IN 1994

Studies at UCT analysing student enrolment numbers found that “increases in the number of black South African entrants have occurred in reaction to political events” (Carter 2004), both on a national and local level – peaking in 1995 due to the 1994 democratic elections and again in 1999 due to the various initiatives put in place after the 1997/98 student revolution. These numbers are volatile, however, as is indicated by the drop in black student enrolment by 2003 to pre-1999 numbers, and indicate that the initiatives put in place in 1998 needed to be sustained and constantly re-evaluated for black student numbers to permanently increase. Carter suggests a three-pronged approach:

- Institutionalised selection policy to maintain demographic trends.
- Development of a more robust teaching strategy to deal with the consequences of increased diversity.
- Increased resources need to be deployed to the access project as an integral task of teaching in the undergraduate programme. (Carter 2004)

A face-value evaluation of the BAS applications to UCT from 2002 to 2004 from Carter’s study indicates that between 46% (2002) and 48% (2004) of applications were from black applicants (Black; Asian; Coloured and Indian), but the final intake of black applicants to BAS dropped to between 26% (2002) and 38% (2004) of the registered cohort. A closer look reveals that SADC foreign black students registered in 2004 form 52% of the black students registered in that year. This trend increased from a low ➤

IN ARCHITECTURAL EDUCATION, THE TRANSFORMATION OF ACCESS APPEARS TO HAVE THREE MAIN THROUGHPUT BLOCKS – ACCESS TO UNDERGRADUATE STUDY, THE LARGE ATTRITION RATES OF STUDENTS FROM FIRST TO SECOND YEAR, AND THE ATTRITION AT THE JUNCTION OF THE UNDERGRADUATE WITH THE POSTGRADUATE DEGREE

base of 14% of all black registered students being foreign in 1994 to a high of 52% in 2004. If one only takes into account the South African black students, then their representation in the cohort drops to 13% in 2002 and 24% in 2004. Carter's conclusion that a dedicated programme for a renewed access project was required is supported by the statistics. "The task of building a substantive and sustained shift in access and success is still only beginning, and the next ten years of transformation will make or break the architectural equity project". (Carter 2004)

STRATEGIES EMPLOYED AROUND THE COUNTRY

UCT currently has a strategy of preparing promising learners before application to ensure improved access, and a highly selective entry process. The result is still a much less diverse cohort as compared to other universities, but also a reduced need to support the first-year student and thereby reduce attrition rates at the end of first year.

Initially many universities put in place Academic Development Programmes (ADP) to address the second block to transformation of access, namely the large attrition rates from first to second year. The programme's mission was to address the gaps between schooling, especially sub-par schooling and first year and thereby provide a bridging platform to enable students from disadvantaged backgrounds to succeed. In practice, this bridging year prepared students for first year, but also extended the degree by a year – with its concomitant financial, social and other repercussions.

The University of the Witwatersrand (Wits) ADP ran for five years, took in 10–15 students per year in the school of architecture, and had a success rate of two students registering and commencing their first year of undergraduate architectural studies (BAS). Even though the programme and school heads deemed it to have been successful, the success rate in terms of the enrolment for the first year of study in architecture was deemed to be insufficient for the capital investment and the programme was discontinued. Dean of the Education Faculty David Freer said: "We're not closing down academic development. We are seeking to refocus it within the faculties so it becomes part of mainstream academic activity." (Garson 1995)

This refocusing within the existing programmes and faculties is supported by anecdotal evidence where comments from students who went through the ADP highlighted the sense of alienation they felt in being singled out from their peers.

The divisiveness of the ADP programme was also highlighted at the School of Architecture of the University of Cape Town (UCT) when during the so-called student revolution of 1997/98 students requested that the separate academic development programme be integrated within the current programme, arguing that parallel programmes result in "longer and more expensive tuition, stigmatisation and divisiveness, additional and vulnerable bureaucracy." (Carter 2004)

One of the results when the ADP was incorporated into each faculty was that additional staff posts were created to assist with the focused academic support within each degree.

At the Wits School of Architecture, 15 students previously streamed into the ADP were allowed entry directly into the first-year BAS. A first-year class that previously numbered 60, now numbers around 75 to 80. To deal with the additional student numbers, additional tutors (honours or masters students) were introduced, increasing the ratio of staff to students, especially in studio-taught subjects – design and construction – where the additional attention and hands-on teaching is purported to help those students requiring support. Over and above the additional staff, several initiatives were put in place to address the perceived various shortcomings of students – be they poor schooling, language skills, or cultural and academic environment adaptation issues.

At UCT, dedicated academic posts were created and staff tasked with identifying students with common difficulties and developing unique solutions as required.

At Wits, the additional tutors in the studio subjects assisted with supporting students, but Ariane Janse Van Rensburg started a more focused initiative as part of her Action Research PhD (Janse Van Rensburg 2015). These initiatives and strategies applied to first-year Design and Theory were measured, and proved that successful transformation should be addressed through a number of avenues – namely curriculum content, teaching methods and social integration and cohesion, effectively the **transformation of access, canon and pedagogy**. This focus on multi-pronged strategies that reinforce each other effectively levelled the field of a very diverse first-year cohort overcoming varying educational, social, economic and language barriers, as well as creating a cohesive, multi-cultural studio.

"There was an improvement in class cohesion, inclusiveness and support and increasingly more

racial integration in social groupings. Both the average predicted potential (as measured by selection scores) and the average performance in relation to potential of students from PMRG (previously marginalised race group), increased from 20% below the trend line for the class. ... The discourse ... widened over this period and the quality of design solutions expressing diverse cultural approaches had improved. There was no discrepancy between the pass rate and the retention of students from PMRG and white students, and there has been a slow but steady increase in the ratio of students from PMRGs in the class, who have been supported to perform to their potential.” (Janse Van Rensburg 2015)

The conclusions drawn were that differences in cultural background have a greater effect on student outcomes than their foundational academic learning. The various strategies included the deliberate critical facilitation of diversity and establishing a socially cohesive studio that “offers social support and agency ... especially for students coming from non-dominant backgrounds ... (and) has the potential to build a culturally diverse knowledge base, increase cross-cultural understanding and broaden the academic discourse”. (Janse Van Rensburg 2015)

This strategy addresses the ‘outsider’ feelings expressed by students previously in the ADP programme as well as the sense many students have of being the ‘outsider’ both in terms of being outside a professional habitus, and in terms of race, gender, class or foundational education background. In South Africa, in particular, the outsider status is further complicated by the fact that the professional habitus is in the process of transforming from the previous hegemony of a Eurocentric architectural and urban culture to one more reflective of our current hybrid environment. In a sense, all students start as ‘outsiders’ to the profession, with those that do not fit in with the dominant culture (at whatever point it is in its transformation) potentially more in need of academic support and development. This widens the identified group of students requiring support from the narrow focus of a particular racial, class or even gender grouping, and thereby reduces the stigmatisation. One of Janse Van Rensburg’s strategies underpins this by providing supportive teaching for the whole class, not only so that struggling students are not stigmatised, but also acknowledging that the identification of students that require support cannot be so easily defined. This also ensures that all students receive dedicated support to perform to their individual potential.

ADDRESSING THE LACK OF RESOURCES

Further initiatives by other staff members concurrent with Janse Van Rensburg’s Action Research in the Design and Theory course entailed addressing the lack of resources – financial and otherwise. Studio-based courses are especially tough for students who have limited financial resources with the amount of paper and model-building materials required to complete projects. In the years

prior to 2011, it was found that students with access to professional grade model-building materials obtained enhanced marks for model projects, and both discouraged and disadvantaged those students who were financially unable to buy these materials. New project briefs formulated for 2011 for Construction and Technology I (Chungu, et al. 2011) restricted students to building models only in ‘found’ materials. This not only levelled the inequalities in available resources, but also focused on recycling and creativity in reinventing materials. Added to the materials issue is one of transport, especially to sites within Johannesburg inaccessible by public transport. Sites closer to, and even on, campus were chosen to ensure that all students have the means to visit sites as often as they want. This resulted in improved outcomes for students with financial constraints, and in a more engaged, socially cohesive and creative studio.

STUDIO-BASED COURSES ARE ESPECIALLY TOUGH FOR STUDENTS WHO HAVE LIMITED FINANCIAL RESOURCES WITH THE AMOUNT OF PAPER AND MODEL-BUILDING MATERIALS REQUIRED TO COMPLETE PROJECTS

The conclusions drawn are that project briefs, especially in first year, need to be carefully considered to not only address the resource constraints of our students, but also to reflect the current architectural professional environment that is characterised by resource constraints that need to be creatively engaged with.

ATTRITION RATES AND CULTURAL PRACTICE

The last block recognised in the transformation to access project is the attrition rates between undergraduate degrees and postgraduate degrees and therefore the final access to the highest level of professional registration – the professional architect.

The reading of data in terms of race and gender was carried out in a statistical report to SACAP on Transformation in South African Schools of Architecture – 2008. The study noted the gender factor in that “far fewer female than male students seem to enter the profession, pass and go on to higher levels of qualification than their male counterparts”. A racial reading of the statistics is similar to that of gender, with the ratio of black students to white declining most markedly in the final years of the first degree and in registration for the second degree. Anecdotal evidence seems to suggest that this attrition rate in the registration for the second degree might have less to do with a lack of academic support and more to do with a change in ➤

career path, or financial pressure to earn a salary after the first degree versus the registration for another degree with its accompanying financial constraints.

The first formation of an architectural programme outside of the universities as suggested by Lipman – the Open Architecture Online Architectural Learning platform (www.openarchitecture.co.za 2016) – is in fact an initiative that addresses more the transformation of access than it does transformation of canon. It is run in conjunction with CPUT, which then certifies the BTech degree it offers, and therefore its curriculum needs to be in line with the existing CPUT curriculum. The programme addresses the final throughput block in architectural education – the drop in numbers in postgraduate programmes – allowing students to both work and study part-time – effectively addressing the financial constraints so many students face at this juncture. The programme is still in its infancy, but there are plans to possibly extend it to address the last throughput in professionalism – the problem with RPL (Recognition of Prior Learning) candidates – and follow the Oxford Brookes model of a certificate programme that allows professional registration. (Poulsen 2016)

“IT SEEMS TO ME NOW, AS IT DIDN'T THEN, THAT THOSE OF US SEEKING A DEEPER CONNECTION WITH ARCHITECTURE WERE LOOKING IN THE WRONG PLACE. WE WERE LOOKING AT COLOUR. WE SHOULD HAVE BEEN LOOKING AT CULTURE”

In terms of the postgraduate degrees and their transformation, a case in point is the new curriculum introduced by Lesley Lokko at FADA, the Faculty of Art, Design and Architecture at the University of Johannesburg. She argues that if universities want transformation this cannot be achieved using the same old frameworks (Lokko 2016) – echoing the concerns of both Lipman and Mills 1994 and Low and Smuts 1997 outlined earlier. The curriculum has to transform and become more experimental to allow the space to articulate difference. (Lokko 2016)

The new Design Research Units framework attempts to straddle two paradigms – a reality-based paradigm believing that architecture needs to be rooted in the real world and the Architectural Association School of Architecture (www.aaschool.ac.uk) based one that strives to give birth to new thinking. The aim is to teach students how to think within a reality-based context and not necessarily to teach them how to build.

The question of access to this postgraduate programme has also been addressed – with less a tick

box attitude than one which seeks to open access, with the result that the cohort appears much more differentiated in their demographics, approaches and output. The previously narrow notion of the field of architectural practice has been thus expanded beyond the ‘designing of buildings’ to what appears to be a more enlarged notion of architectural cultural practice in all its myriad forms. This appears to be a result of both transformation of canon and access. (Lokko 2016)

This focus on a diversity of cohort echoes Janse Van Rensburg’s 2015 critical facilitation of diversity and is “particularly relevant as architecture is a form of cultural expression ... assignments that offer cultural choices work particularly well to establish the legitimacy of non-dominant cultural approaches.” (Janse Van Rensburg 2015)

“The presence of an ever-increasingly diverse and fragmented society raises many challenges in the design professions and the educational institutions that support them. Some of these issues are ethical and others are practical. The emergence of pluralistic images of the past, present, and future can open the way for more complex understandings of power and social relations and richer, more diverse design expressions throughout the globe, or they can be largely ignored and marginalised, giving way to architecture, urban spaces, and landscapes that reflect the homogenising effects of modernisation and globalisation.” (Hill 2005)

At the University of Johannesburg (UJ), the space for this transformation was aided partly due to the initiation of a new postgraduate curriculum by an ‘outsider’ in the form of Lesley Lokko when she was tasked with heading up the programme. The conflation of the lecturer as outsider purposed with assisting the final enculturation of students who need to successfully complete the postgraduate degree as the last block to access to the profession is an interesting inversion of the power dynamics of cultural politics that are at play in design education as noted by Margarita Hill. “Whether we are consciously aware of the consequences, there is a theoretical base to all actions of educators. We implement pedagogic theory when we organise our lectures; choose certain readings over others; plan the content and approach to instruction; choose the site and scope of the studio project; conceptualise the type of exchange between teacher and students; establish the type of relationship the students will have with the client, user groups, or professional base; and so on. These actions go beyond the transmission of knowledge and skill development and simultaneously engage students in power relationships that constitute what some educational theorists refer to as ‘cultural politics.’” (Hill 2005)

These power relations need to be more carefully analysed, especially in relation to the studio sessions, where power relations, and the enculturation of students into the dominant culture are laid bare. “The design jury’s ritualistic practices had the effect of objectifying a power differential between critic and student and that this asymmetry of power profoundly distorted the

pedagogic outcome". Mark Frederickson (Frederickson 1993) has reported on gender and racial bias in design juries in architectural education. His research, based on videotaped protocol studies of design juries, examined issues such as interruption, opinion polarisation, idea building, advisement, questioning, jury kinesics and proxemics, sexual and racial bias, and verbal participation rates, among others. Frederickson's results identified several consistently biased practices in design juries that disadvantage underrepresented students and faculty.

Therefore it would be an interesting study to unearth the cultural politics at play in the interaction of Lokko with her students. Lokko's previous insights and research into the black and white binary in architecture and her foreign status give her a unique critical distance, and in a self-critique of her anthology 'White Papers Black Marks', she stated: "Unwittingly, perhaps, the anthology itself remained trapped in its own simplistic binary: black/white. It seems to me now, as it didn't then, that those of us seeking a deeper connection with architecture were looking in the wrong place. **We were looking at colour. We should have been looking at culture.** The casual, lazy assumption of a link between cultural identity and skin pigmentation obscured a deeper truth – that there was a much more interesting relationship to be had, if only we'd looked. But South Africa's challenge, to carve out its own, unique, hybrid culture is made more complex precisely because the overriding logic of its particular condition has always **conflated race, culture and class** in ways that cannot be easily separated". (Lokko 2007)

It is the unseen cultural politics that have the greatest potential to either assist or disrupt the transformation programme precisely due to this conflation of race, culture and class in the South African context. "Practices

– microtechnologies of power – surveillance, normalisation, and examination ... are widely used by all ... institutions to control entry or train individuals towards a dominant disciplinary paradigm or habitus". (Foucault 1975)

CONCLUSION

In architectural education, the student is an 'outsider' needing to be indoctrinated into the ways of the profession. In the South African context, and due to the conflation of race/gender/class/economics/culture, the unseen culture politics have the greatest potential to either assist or disrupt the transformation programme. In this are "existing schools challenging established privilege or entrenching it"? (Lipman and Mills 1994)

The dominant disciplinary paradigm both in architectural education and practice in South Africa appears to be highly fluid, with each school grappling with transformation of its culture. In this fluid environment, the need to "create the space for difference to express itself" (Lokko 2016) is perhaps the primary imperative. This space for experimentation, for success and failure, and simply for difference to co-exist is the one which could ensure that the very notion of a dominant culture is not replaced with another cultural hegemony. As Low and Smuts projected back in 1997, the need for a creative act of a local African commons is perhaps in the end the greatest imperative for an architecture for all. And, as seen in the various universities is a project in progress.

In memory of a first-year student whose untimely passing prompted the questions that led to the above search for some answers, even though many more questions and avenues of exploration arose than concrete answers to the questions first posited. ■

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A PHENOMENOLOGICAL APPROACH DEEP HISTORY FOR ARCHITECTURAL STUDENTS

An exploration into embodied learning as a method for teaching deep history and for creating more inclusive teaching styles.

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ABSTRACT

Given the rise in diverse architecture students entering South African universities, lecturers have had to devise ways of teaching theory and histories of architecture that embrace the variety of cultural backgrounds. At the University of the Witwatersrand (Wits) School of Architecture and Planning, we have begun exploring teaching methods that go beyond cognitivism, borrowing rather from embodiment and thus using lived experience as a way of knowing. This paper explores the effectiveness of the dialectical relationship between lived experience and deep history as a teaching and learning method on students when they are encouraged to physically engage in making artefacts based on archaeological data. It further argues that this method shows promise and gives insights into how we might approach architectural education with a view to mitigating marginalisation and inaccessibility.

KEY WORDS:

- lived experience
- embodied learning
- phenomenology
- deep history
- archaeology

INTRODUCTION

In 2015, the Wits architecture programme introduced a new component to the first-year history and theory course. In addition to the more conventional history programme, we introduced a component focusing specifically on deep history (previously known as pre-history¹). The aim of the newly introduced component was to give students a better understanding of the place of hunter-gatherer (specifically Bushman/Khoi-San Hunter Gatherers) art of making in Southern Africa during the Holocene (10 000 years before present). Consequently, the course was approached using phenomenology, embodiment and existential philosophy as theoretical frameworks. This was an attempt to go beyond dualistic/objectivist pedagogies, which often represent historic societies as the 'other'. The approach was inspired by and drew on a similar course, run by Professor Tim Ingold² at the University of Aberdeen, called the 4A's – anthropology, archaeology, art and architecture.

The Wits first-year theories and histories of architecture course relied on students being part of the research and embedding themselves (the body) within various contexts. This experiential learning included physically making artefacts based on archaeological findings, visiting rock art sites, and interacting with contemporary indigenous practitioners as well as archaeologists who specialise in experimental archaeology. Although the course is still in its infancy, with only two cohorts of first-years having gone through the programme, preliminary observations indicate that the teaching methodology has the potential

PRELIMINARY OBSERVATIONS INDICATE THAT THE TEACHING METHODOLOGY HAS THE POTENTIAL TO TRANSCEND SOCIAL AND CULTURAL BOUNDARIES, ALLOWING ACCESSIBILITY TO OTHERWISE DIFFICULT THEORETICAL CONCEPTS

to transcend social and cultural boundaries allowing accessibility to otherwise difficult theoretical concepts.

The discussion below presents a few of the teaching experiments and some preliminary thoughts on embodied learning as a method for teaching deep history and a way of creating more inclusive teaching styles. After this short introduction, the paper will briefly discuss the background to the study, followed by a theoretical framework anchored in embodied learning from a cultural neurophenomenological perspective, and why this was initially seen as an important approach for teaching deep history and Bushman society. The paper will then discuss the specific activities that students engaged in. This will be followed by a presentation of preliminary findings from informal student engagement. The paper will then end with an overview and conclusion.

BACKGROUND

As a black student studying architecture at Wits, one of the most interesting issues for me was trying to gain a deeper understanding of placemaking among indigenous communities. This became the topic of my M. Arch. (prof.) (Maape, 2011) thesis and later continued as a PhD study (Maape, 2016). The latter focused on trying to better understand the ways in which past indigenous communities inhabited the environment, and specifically how ritual mediated the relationship between people and place. One of the issues I came across was that the archaeological methodologies of collecting and preserving data created a fundamental limitation, artefacts could not be used. In other words – when one analyses a grinder and grindstone from a particular archaeological record, one may not actually grind with the grinder on the grindstone to physiologically gain an understanding of the usage of the artefact. The need to preserve artefacts, as well as objectivist frameworks of analysis, removed what is arguably the most important element toward better understanding these kinds of artefacts, namely the body in action.

During my initial fieldwork studies (unpublished fieldwork), I held face-to-face discussions with indigenous craft practitioners and makers³. According ➤

THE COMMON ARGUMENT HAS BEEN THAT THE MIND AND THE BODY CANNOT BE SEEN AS SEPARATE SUBSTANCES AND THAT INDEED THE BODY/BRAIN IS PART OF A LARGER ECOLOGY THAT TOGETHER CREATES CONSCIOUSNESS, PERCEPTION AND OTHER 'MIND-LIKE' QUALITIES

to one practitioner⁴, the process of skilling an individual is a prenatal activity that starts well before the future practitioner is born. A pregnant mother would engage in a variety of practices, such as weaving, cladding a house, or making a pot. As the mother moves her body and engages in the practice, the unborn child is immediately brought into apprenticeship. The rhythm of the mother's body has the consequent effect of stimulating the body of the unborn child; thus beginning the skilling process (Unpublished fieldwork interview conducted as part of my PhD research. 2014).

BY GOING OUT TO WORK IN THE FIELDS WITH BABIES CARRIED ON THEIR BACKS, WOMEN PHYSIOLOGICALLY TRANSMIT THE RHYTHMS OF THE BODY TO THE CHILD AS THEY WORK

Similarly, by going out to work in the fields with babies carried on their backs, women physiologically transmit the rhythms of the body to the child as they work. According to the practitioner, mothers would often deliberately work while it was raining to further stimulate the child's senses. As the child grows into a young girl, her mother would make miniature tools that the young girl would use to practise. The little girl would mimic her mother (or grandmother) as she works, developing her skill through doing so. The indigenous practitioner described with a sense of nostalgia how, as a young woman, her grandmother built her an unfinished courtyard that she would use to practise making a dung floor.

EMBODIED LEARNING AND CULTURAL-NEUROPHENOMENOLOGY

In his thesis, Dr Heinrich Kammeÿer (2010) looks at how the building of a house by a Sotho woman is not merely a utilitarian process, but is rather a phenomenological and existential practice of constructing a new identity. Interestingly, Kammeÿer reported similar processes of learning as discussed above, including the skilling of the unborn child as well

as the different levels of skilling in relation to social maturation (Kammeÿer, 2010: 109). This demonstrates that indeed some indigenous communities saw embodied learning as a means of transferring skill. This is, of course, not a uniquely South African or African phenomenon and has been studied extensively by anthropologists (Ingold, 2000: 354).

Tim Ingold borrows from concepts developed by phenomenologists, particularly Maurice Merleau-Ponty (1908–1961), and alludes to the notion that “representation” and “information” are not necessarily the primary means of transferring skill. This is not to deny the presence of cognitive functioning in the processes of learning, but rather emphasises the role of the body and activity-based learning. Embodiment as a theoretical framework could be seen as a way of resolving the dualistic paradigm often associated with Rene Descartes (1596–1650) who generally argued that the mind is separate from the body (Rene Descartes in *Rodriguez-Pereyra*, 2008, p. 71). The dualistic model has been severely criticised, particularly by phenomenologists and more recently by neuroscientists (Csordas, 1994; Heidegger, 1996; Varela, 1996; Lakoff & Johnson, 1999; Edelman, 2003; Johnson, 2007; Damasio, 2010; Ingold, 2013; and Mallgrave, 2013). The common argument has been that the mind and the body cannot be seen as separate substances and that indeed the body/brain is part of a larger ecology that together creates consciousness, perception and other ‘mind-like’ qualities.

Nunez and Freeman (1999) went on to develop these concepts further, arguing that even mathematics emerges from an embodied ground and that cognition can only function in a biophysical, embodied and situated system. Others such as Csordas (1994) see the body as the existential ground of the self, and that indeed even the most metaphysical concepts such as God or the Numinous are situated and embodied (d'Aquili & Newberg, 1998). These concepts would later be synthesised into a field of study called cultural-neurophenomenology, which not only studies the formation of the self, identity and learning from a universal perspective of embodiment and situatedness, but goes further to explore cultural practices such as initiation rites, rituals of worship and supplication, in particular cultural groups using neurophenomenology as a theoretical framework and methodology.

DEVELOPMENT OF ARPL 1013 SYLLABUS AND TEACHING METHODOLOGY

Given these insights, that indeed past indigenous communities developed skills through embeddedness and engagement, and that this has perhaps been lost due to the widely disseminated notion of Cartesianism (mind separate from body), the school began discussing the possibility of reintroducing the embodied mind as a tool of learning. This was especially important given that students were being taught about people who themselves constructed meaning and developed skills through embodied practices. Furthermore, this was seen as an opportunity to address the theoretical gap between subject matter and scholar, in a sense resolving a similar distance between the anthropologist and the object of study, the latter often being non-Western cultures.

A useful springboard was Tim Ingold's 4A's course that he teaches at Aberdeen University. He relied on the students' own subjective experiences as an exploratory tool, engaging them in weekly practical sessions that included collecting objects, flying a kite, stringmaking and knotting. Students were required to observe the flow and ebb of materials, structures and places. Ingold (2013) discusses the ways in which we gain knowledge of things through interacting with them, in one case using the specific example of a hand axe and the way the tool is co-created by the dexterity and morphology of the hand, natural forces and inherent qualities of the material (Ingold, 2013: 10).

Drawing on a synthesis of the PhD findings discussed above and the course developed by Ingold in Aberdeen University, we proceeded to define a syllabus. The course was broken up into lectures, making-workshops and seminars. The workshops were the anchor of the course. Every week the students would engage in the production of an artefact, a hand axe, a bone tip for an arrow, a clay pot and rock paintings. A practitioner would discuss the context and purpose of the artefact, then engage in a demonstration of how the artefact is made. Students would then engage in producing the artefact themselves. Furthermore, students visited various archaeological sites. The visit included walking through the sites, sketching and noting what they observed.

Students were then required to write about their experiences of making in a descriptive essay format. Many would describe the physical pain, particularly when crafting a hand axe. They described in detail how they invariably struck their fingers with the hammerstone when trying to produce flakes. Many of them described the tedious time-consuming and laborious processes they went through to create the artefact, often expressing the frustrations of failure they experienced while learning how to make it.

THE COURSE WAS BROKEN UP INTO LECTURES, MAKING-WORKSHOPS AND SEMINARS. THE WORKSHOPS WERE THE ANCHOR OF THE COURSE. EVERY WEEK THE STUDENTS WOULD ENGAGE IN THE PRODUCTION OF AN ARTEFACT, A HAND AXE, A BONE TIP FOR AN ARROW, A CLAY POT AND ROCK PAINTINGS.

PRELIMINARY OBSERVATIONS AND FINDINGS FROM THE WORKSHOPS

Based on informal discussions with students and staff colleagues, and my own personal observations, which were not intended to be part of an ethnographic study or used in any way as empirical data, a few observations were made.

One of the exercises was making lithic tools, hand axes, flakes and adzes. Students were required to procure their own raw materials from home. Once the accomplished practitioner (archaeologist) had completed the demonstration, students then engaged in crafting their own tools. They immediately began striking stones together, using their randomly chosen rocks as hammerstone to extract useful tools. The first interesting observation was aural: the asymmetrical, arrhythmic noise of rocks striking against each other. The noise immediately created an atmosphere in the studio that would otherwise have not been perceived had students not began their physical experiments.

MANY OF THEM DESCRIBED THE TEDIOUS TIME-CONSUMING AND LABORIOUS PROCESSES THEY WENT THROUGH TO CREATE THE ARTEFACT, OFTEN EXPRESSING THE FRUSTRATIONS OF FAILURE THEY EXPERIENCED WHILE LEARNING HOW TO MAKE IT

The second observation was olfactory: the smell of burnt rock that was emitted from the stones striking each other. This was often accompanied by a spark and sometimes a yell of surprise from our novice toolmakers. Another observation made during the stone tool workshop, which we discussed at length with students, was the number of times they struck themselves with the hammerstone, often leading to minor yet painful injuries. ➤

EXPLORING AN ARTEFACT MEANT THAT STUDENTS ENGAGED WITH IT, AND WERE IMMEDIATELY IMMERSSED IN A CONTEXT, INCLUDING THE CONTEXT OF HUMANITY. INSTEAD OF SEEING THE SUBJECTS OR SUBJECT MATTER AS SEPARATE FROM THEMSELVES, THEY WERE MADE TO APPRECIATE THE COMMON HUMANITY THEY SHARED WITH PAST INDIGENOUS COMMUNITIES.

A particularly interesting discussion that often emerged during this workshop was the gender specificity of the practice. Some male students perceived the stone tool making as a male practice, whereas female students protested this view. It was, however, clear that all students appreciated the labour-intensive experience of producing the stone tool. Very little involvement of lecturers was required and students were given the space to experiment, discover the properties of the materials and engage their body and their senses.

THE INDIGENOUS PRACTITIONER SPENT LITTLE TIMESPEAKING ABOUT THE PRACTICALITIES OF DEVELOPING THE CLAY POT, BUT RATHER DISCUSSED THE SYMBOLIC MEANING OF THE POT.

The clay pot workshop also created an interesting situation, drawing out particular experiences. Unlike producing the stone tool, the clay pot workshop was silent and tranquil, more like a sacred ritual. Whereas in the stone tool making workshop where a white male gave students a demonstration, the clay pot process was facilitated by a black female indigenous maker. The indigenous practitioner spent little time speaking about the practicalities of developing the clay pot, but rather discussed the symbolic meaning of the pot. For instance, she described how the making of the pot, similar to the building of the house, was in actual fact the development of the self. She described the philosophical and spiritual implications of making rather than the practical or strictly utilitarian factors.

The indigenous practitioner's method of discussion was in narrative form and emotive, often synthesising mythology, history and personal experiences. The maker gradually began making the clay pot, although not discussing it in any direct sense. She then instructed students, who each had a lump of clay on their table, to begin making. Immediately, students would observe

the maker's movements and in perhaps an intuitive manner began mimicking her. Again this was different from the archaeologist's method that first described and demonstrated making the hand axe and then students proceeded to make their own. Once all the students had started the process of making, the indigenous maker would approach them randomly at their tables and work on their pots, sometimes moving the student's fingers to impose a particular dexterity.

Perhaps the most important observation was the manner in which the indigenous maker could engage some of the black students in their indigenous language. Perhaps the word language is limited in this sense because it does not include physical gestures, cultural proclivities and subtle behavioural nuances that can often only exist within a particular cultural context. This was particularly evident with the black female students and the familiar manner in which they responded to the maker who, one could argue, symbolically represented a grandmother. This was obvious to me because of my own lived experience being raised in a Tswana family. The subtle manner in which the indigenous practitioner spoke to the learner, and her presence, seemed to create a very particular atmosphere that I personally cannot induce as a male lecturer in spite of my cultural background. This immediately revealed how the relationship between apprentice and accomplished practitioner might have been in a traditional indigenous context. It also opened up a sense of the possible limitations of the transfer of knowledge when dissemination is divorced from the learners' own lived experience.

DISCUSSION AND CONCLUSION

From a cultural neurophenomenological perspective, learning happens physiologically. The discussions I had with indigenous practitioners, as well as literature such as Heinrich Kammejer's study demonstrate that embodied learning was the manner in which indigenous communities transferred skills. Furthermore, Kammejer and other phenomenologists have been intellectually bolstered by neurophenomenology which has demonstrated the neural basis of embodiment, arguing that even the most mind-orientated phenomena such as self, identity, and so on, are grounded on the body/

brain and situated within an ecological context.

Based on these assertions, we developed a course that would embrace the role of the body (somatic and existential) as fundamental for the process of knowing. Exploring an artefact meant that students engaged with it, and were immediately immersed in a context, including the context of humanity. Instead of seeing the subjects or subject matter as separate from themselves, they were made to appreciate the common humanity they shared with past indigenous communities. These commonalities were expressed in the simplest ways such as the hands we all possess, our common dexterity and our universal embodiment. Students could appreciate that they too shared bodies that could experience fatigue and ache from long periods of skill acquisition or production of artefacts.

What is crucial to note is the manner in which this teaching approach requires very little discussion, and can allow students to understand through the skin and muscles⁵. This is important because describing a hand axe to a student who may have never encountered such a concept⁶ as a tool created by a person who lived 10 000 years ago may be otherwise challenging without having to do a considerable degree of reconditioning⁷. On the other hand, we see that even though embodied learning can assist us to transcend cultural boundaries by demonstrating our common embodiment, the intersubjective lived experience of people who co-evolved in a particular context has an impact on the way knowledge is transferred (Maape, 2016). Although our indigenous practitioner was engaged in physiological teaching and learning with students, subtle body gestures and nuances in vocal

tone only emerged when the practitioner was expressing herself in her own [body] language, which demonstrates how much could be lost in translation when Western academics teach indigenous students.

In spite of this, and based on these preliminary observations, it seems that an embodied approach may be a useful way of giving students a deeper sensing of the subject matter. Not only do students appreciate the humanity of the 'other', in this case, a hunter-gatherer from the early Holocene, they also can simultaneously perceive their own existential situatedness. There is certainly more that needs to be done to explore these ideas, perhaps more critical now given the need to urgently transform our institutions of learning in South Africa. ■

¹Deep history is referring to a position taken by Smail & Shyrock (2011) who argue that conventional histories methodological approaches, which often rely on written text and a powerful set of narrative motifs, are limited when trying to understand the world in the deeper past, hence the term "pre-history", but today this is counteracted by archaeology and palaeoanthropology, which gives us the ability to understand the deep past and include it in our general narrative of history, hence they call it "deep history".

²The course is further elaborated on in Ingold, *Making: Anthropology, Archaeology, Art and Architecture*, 2013

³This is data collected when I interviewed a Pedi artist and maker (name not mentioned for ethics purposes) who described some of her indigenous making practices based on personal experiences she had in her childhood up until she was a fully matured maker. The maker was born and raised in Marapyanne, north of Pretoria.

⁴This is paraphrased from the discussions I had with the indigenous practitioner and should not be taken as scientific fact, but rather as an intersubjective (or indigenous knowledge, which can be corroborated with findings from Kammejer (2010)) account of experiences in a particular context that cannot be discounted merely because no positivistic scientific verification has been conducted. Furthermore, this demonstrates the appreciation and respect of learning through doing in the practitioner's culture

⁵This literally is referring to the physical learning through bodily skill acquisition and practise.

⁶Specifically students from an underprivileged background and those who attended schools that were not using English as their main medium of teaching.

⁷Assimilating the student into a Western paradigm

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