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RISK AS PRODUCTIVE IN LANDSCAPE ARCHITECTURE PEDAGOGY

ABSTRACT

This paper explores the notion of "productive risk" as a way of understanding how diverse students can become re-makers of landscape architectural design practices and education. We trace the design trajectories of two first-year students at a South African tertiary institution and examine how the students negotiate the risk of drawing on their own experiences and resources in order to access conventionalised disciplinary practices. It is important to recognise students' brought-along resources, but we also need to recognise the risk involved for the students and teachers in drawing on these resources. This risk needs to be seen in the light of a history of colonised education where diverse resources and experiences were often disregarded or devalued. We show how these students contextualise landscape architecture in terms of their own experiences and draw on their resources as prompts to space-making for the imagined users of their designs. We surface the risk in terms of students' experiential resources as well as the use of unusual model-building materials and techniques. The high levels of engagement that these two students demonstrate in their design trajectories reveal the importance of making a connection between diverse contexts and the landscape architectural classroom. We argue that a pedagogy that embraces risk as productive can recognise and validate the rich knowledge, resources and experiences that students bring with them.

Keywords: *Student resources; risk; landscape architecture; diversity; access; multimodal pedagogies; design education.*

1. INTRODUCTION

We are interested in Thesen and Cooper's (2014) notion of "productive risk" and how this illuminates the interface between diverse students bringing their own resources to their learning experiences and the conventional design resources in landscape architectural classrooms. Instead of portraying risk as a threat or in need of mitigation, Thesen and Cooper (2014) and their contributors adopt a "warm" notion of productive risk, "concerned with the experiential domain, the lived world of [students] weighing up what they will or will not say" (Thesen, 2014: 12). Viewing students' practices through a warm notion of risk allows teachers to recognise the ways in which students may negotiate landscape architectural form and space through their own experiences, position and values.

Landscape architecture is, broadly, the design of outdoor spaces, "a discipline that shapes material landscapes to enhance human experience" (Swaffield, 2006: 22). Because of its European and North American roots, we are concerned that current forms of landscape architectural education tend to be quite heavily influenced by dominant north perspectives and often may, if not always consciously, privilege particular ways of meaning-making or knowledge production. This research is located in the studio project of a first-year landscape architecture course at a South African tertiary education institution. Although this classroom and its participants occupy a small fraction of time and space, they are part of the complexities of the local and global worlds outside its walls. The students live in Global South contexts while simultaneously living in a world that is dominated by "Global North" views. By "Global North" we do not mean a geographical location, but rather a particular ideological perspective, a single point of view, which has been responsible for, among other things, the justification of colonialism, patriarchy, exploitation of natural resources and widening social and economic inequalities (Santos, 2014: 10; Kerfoot & Hyltenstam, 2017: 1). In South Africa, this single point of view not only promulgated three centuries of colonial rule as well as the more recent apartheid system of institutionalised racism and discrimination, but also erased and rejected many alternative values, social practices and knowledges (Santos, 2014: 5; Kerfoot & Hyltenstam, 2017: 1). These systems and beliefs have often affected physical and epistemological access to education, particularly to those who have historically been made marginal to the dominant viewpoint.

Many teachers in higher education have had to confront the effects of a single perspective and have worked towards uncovering ethical and responsible pedagogies that embrace diversity. The solution is not to replace one single perspective with another, but to practice a "hermeneutics of suspicion" (Santos, 2014: 44), to be aware of absences and silences (Kerfoot & Hyltenstam, 2017: 1) that may be at the margins of the dominant perspective. Given the inequalities in education in South Africa, students from diverse educational backgrounds are often labelled as "underprepared" (Jaffer & Garraway, 2016). However, there is a problem in viewing students' educational backgrounds as a hindrance. In fact, diverse backgrounds "can serve as critical informants to the design of curricula in design schools" (Saidi & Nazier, 2011: 186). Instead of dismissing meaning-makers as incompetent, deficient or in need of remediation, pedagogies of "recognition" focus on the agency, identity, ways of knowing and learning and resourcefulness of the meaning-maker. "This may mean drawing on resources that were previously unnoticed or devalued since they seemed inappropriate in an educational setting" (Archer & Newfield, 2014: 6).

In order to interrogate risk in terms of access and recognition, this paper traces the design trajectories of two students, Mbulelo and Cebisa, as they engage with a spatial model project in a first-year landscape architectural design studio. The data presented in this paper is part of a larger study that investigates the question: "what resources do diverse students bring to their learning experiences in the context of landscape architectural education?" (Price, 2020). While 34 students participated in the study, this paper focuses on two of these students and their successful engagement in "productive risk". We selected these two for discussion, not to be representative of all the students, but because their projects illuminate different kinds of risk taking and its potentials. Mbulelo and Cebisa contextualise landscape architecture in terms of their own experiences and draw on their resources as prompts to space-making for the imagined users of their designs. We explore what it means for these students to bring their own resources to their learning environment in order to access the dominant discourse.

2. METHODOLOGY: A SOCIAL SEMIOTIC APPROACH TO PRODUCTIVE RISK

We employ a multimodal social semiotic approach to identify and analyse resources that diverse students bring to their learning environment so that these resources may be utilised to access and challenge dominant landscape architectural educational practices. According to this approach, the meaning-maker is not seen as (il)literate, (in)competent or (under) prepared. Rather, the focus falls on the students' interest, agency and apt use of available resources in the moment of meaning-making (Kress, 2010). Multimodal social semiotics has an established relationship with South African education (Archer, 2014; Archer & Newfield, 2014; Newfield, 2013; Salaam, 2017; Simpson, 2014; Stein, 2008) in its quest to "develop curricula and pedagogies which speak to the diversity of global societies and the development of students' voices" (Stein, 2008: 3). The main focus of multimodal social semiotic analysis is on the sign-maker and their situated use of modal resources. There is a strong emphasis on the notion of context. "The context shapes the resources available for meaning-making and how these are selected and designed" (Jewitt, 2014: 33). In addition, a multimodal social semiotic approach foregrounds interpersonal meanings in terms of affect and power. This methodological approach thus enables research to

> open analytical spaces for realities that are "surprising" because they are new or have been ignored or made invisible, that is, deemed non-existent by the Eurocentric critical tradition (Santos, 2014: 44).

Our social semiotic approach to the multimodal analysis of students' engagement in productive risk in their landscape architectural designs is developed from Halliday (1978). Halliday refers to three kinds of semiotic work called metafunctions, that are present to some degree in every text. The ideational metafunction represents objects and their relations in a world outside the representation system. In the students' models, ideational resources include their narrative or guiding theme for their spatial designs as well as the ways knowledge is organised in their design to construct an argument. The interpersonal metafunction locates meaning-makers, users or viewers of texts as well as participants represented in the text in a system of social relations, social viewpoints, evaluative orientations and affective identifications. In the spatial model project, interpersonal resources include the affect, interaction and identity of the user as well as how the students position themselves in relation to other makers-of-texts through the use of precedent. The textual metafunction refers to the way elements of the text are arranged or composed. Textual meaning enables the makers and users of a text to design and recognise patterns and relations between the various elements in the text. Textual meanings in the students' texts include compositional resources such as salience, coherence, cohesion and degree of enclosure as well as physical resources such as elements of design and materiality.

A social semiotic view emphasises that the meaning-maker draws from available resources in order to realise the text. In a landscape architectural studio, students typically present their work in a "crit": an informal discussion between the student and their peers, mentors or teachers, about the student's work, with the aim to assist the student in refining their design. Because the students presented their texts in crit presentations, the texts are moments of "fixing" which Kress (2010: 121) describes as "punctuations" in the "flow of semiosis". These points of fixing allow for analysis of the texts to identify some of the resources that may have shaped the students' texts during the design process. In addition to semiotic resources, students also draw on social, interactive, experiential and pedagogical resources in their

meaning-making processes. What is important and useful about a social semiotic view is that it works across modes of meaning and can be used to identify the prompts, resources, social contexts, representational practices or "habits of meaning" (Halliday, 1978) that shape the meaning-maker's design processes. A social semiotic approach thus focuses on the choices of the student in the moment of design: how they select from a range of resources based on their needs, interest, present situation and social context (van Leeuwen, 2005: 5).

This focus on the choices of the meaning-maker enables us to engage with the notion of "risk" in particular ways. Thesen and Cooper (2014) talk about productive risk that they apply to academic writing. The concept of risk is framed by acknowledging the necessity of including the diverse experiences, voices and knowledges of those marginal to the dominant, often "northern", academic discourse and the dilemmas this may present for the students and the teachers. What does it mean for students to bring their own resources to their learning environment in order to access the dominant discourse? What are the risks of unusual model-building materials and techniques or less "well-acknowledged" resources (Mavers, 2007)? Using a social semiotic approach, we investigate the way that students employ "productive risk" when bringing their own resources to their learning experiences and the ways in which this productive risk can inform the development of a multimodal pedagogy for diversity.

In order to be able to recognise students' resources and trace their movements through a design trajectory, the methodology for this study centred around data collection from a six-week spatial model project in the second half of a first-year landscape architectural design studio subject. Prior to data collection, this research received ethical approval. Students were briefed on the nature of the research project and signed consent forms indicating their choice to participate in the study, partially, or not at all. All participants have been given pseudonyms.

The project required students to design a scaled three-dimensional model of an installation that could convey their chosen narrative to imagined users through a spatial experience. Students were asked to choose a narrative and represent this graphically as a poster. Students presented their graphic narratives to small groups of teachers and peers. At this presentation, the groups helped the presenter to select five themes that they could use in the next phase of the project, namely conveying their narrative through a three-dimensional model or spatial experience. Over the following weeks, students presented three to four iterations of their three-dimensional model designs in crit sessions comprising small groups of teachers and peers. The data collection site included video-recording students' three-dimensional models and their presentations of these. These crit sessions provided moments of "fixing" (Kress, 2010) where students could explain their design choices and also reflect on how and why they may have made these choices. The design of this spatial model project includes opportunities to draw on a range of diverse conceptual and material resources, while also exposing students to some of the "canon" through design practices, spatial design theories and landscape architectural values (especially as manifest in the assessment criteria).

Overall, the students' narratives for this project originated from a range of diverse contexts. They were inspired or prompted by personal experiences, movies, stories, music and news or real-life events. Some students' narratives took place in a domestic setting and some made connections to rural homesteads in the Eastern Cape. Other narratives were based on movies the students had seen. The underlying themes of the narratives can broadly be grouped into three categories relating to inward self-discovery, faith or perseverance and outward-looking relations.

The two students that we focus on here, Mbulelo and Cebisa, both negotiated risk by contextualising landscape architecture in terms of their own experiences (in sometimes unconventional contexts); drawing on their resources as prompts for space-making for the imagined users of their designs and working with unconventional materials. While Mbulelo and Cebisa's earlier models drew on conventional landscape resources, these earlier models only made tentative connections to the students' narratives. Their final models, however, represent a significant shift away from "safe" expectations and take on more "risk" in terms of drawing on their own resources and experiences.

3. MBULELO: RISK IN DRAWING ON UNCONVENTIONAL CONTEXTS

Mbulelo is a young man in his early twenties who describes himself as "someone [who has grown up] in the townships" (Graphic narrative presentation, Mbulelo, 24 July 2017). Mbulelo's design trajectory is significant because he provides insight into the question "how does drawing on students' resources involve risk and in what way is this risk productive?" As Mbulelo moves forward in his design trajectory, he increasingly utilises his own resources and experiences of living in an informal settlement. This could be seen as "risky" because he is not employing "well-acknowledged" resources (Mavers, 2007: 157) such as landscape architectural design precedent and in light of a colonial history, drawing on a context of an informal settlement may also be considered risky. However, Mbulelo's risk-taking is productive because he successfully designs a spatial model that draws on ideational, interpersonal and textual resources from his own experiences. We briefly discuss how Mbulelo employs these resources in the design of his model and how his drawing on an unconventional context in the landscape classroom extends and critiques the canon to some extent.

The narrative of Mbulelo's spatial model design is based on his own life, an aspirational story of "rags to riches, an everyday, black South African story that we hear on the news about the young black men or women, who are struggling financially because of poverty" (Final model presentation, Mbulelo, 30 August 2017). Mbulelo's narrative begins with his "normal life in the township". He indicates that his life and community in the township was insular and that "you only see the real world after Grade 12". Despite financial constraints, Mbulelo secures funding for tertiary education and begins to dream that "one day you want to be something in life". He also describes how he is focused on this goal and does not want others to "distract me because if that happens […] I'm still going to be stuck in the ghetto". When Mbulelo presents his graphic narrative, the group helps him to select the following themes: persistence, goal-driven, path to success, "rags to riches" and obstacles.

During the spatial model project, Mbulelo makes four models. It is Mbulelo's fourth model that we focus on here as it represents a significant shift in complexity and risk. Mbulelo's earlier models use well-acknowledged resources. He draws on landscape architectural macro-genres (Ravelli & McMurtrie, 2016) or archetypes (Dee, 2013) such as walled gardens, edged pathways and water features. He also uses compositional design principles such as balance and symmetry and explicitly uses phrases such as "wall planes" and "central point" showing that he is adopting and taking on landscape architectural vocabulary. By using landscape architectural references, Mbulelo may be signalling uptake of design terms and practice. Despite this, the forms and abstractions of his first three models only make tentative connections to the narrative of his experiences and struggles of growing up in an informal settlement. The fourth model that Mbulelo designs is, however, very different from the first three. The final model is more complex with multiple layers of meaning. Mbulelo does not

draw as heavily on conventional landscape architectural resources as in the previous three models but, as we will show, he expresses his narrative and experiences through novel forms and spaces.
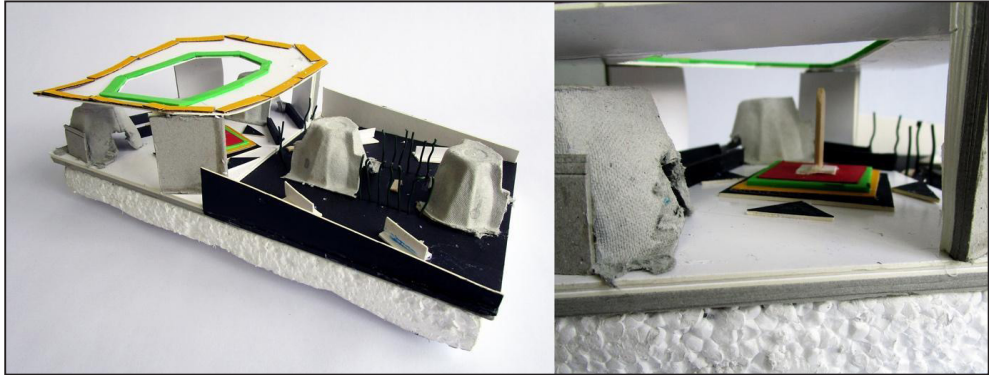

Figure 1. Mbulelo's final model

Mbulelo's final model has a rectangular base and is divided into two sections: the first is characterised by a black ground plane, the second is defined by a white ground plane below and a sky plane above (see figure 1). His use of contrasting colour and demarcation of space using a sky plane differentiates between the "rags" and "riches" components of his narrative. Mbulelo has designed a pathway in the shape of a question-mark for his users to explore his installation. This movement route conveys the sequence of his argument as well as its symbolic meaning: "even if you're going through the road of success, the road [to] success is not straight, so [...] that's why the road is like a question mark" (Final model presentation, Mbulelo, 30 August 2017). The shape of the question mark increases the complexity of the "rags" versus "riches" binaries.

Mbulelo designs spaces and forms that make a connection to his experiences in an informal settlement. Mbulelo explains how he hopes the user will first experience his model: "I used this [*points to egg box objects*] to represent the confusion. As one enters, [the] spatial experience [of] the person is confusion because it's like a dark room". He also explains that "you get confused, you know, which path to go, but they say at the end of the tunnel is light". The use of textual resources such as the colour of the black ground plane and the absence of light inside the "dome", may create the impression of confusion or disorientation. Mbulelo hopes this spatial experience conveys ideational meanings such as the challenges of poverty and life in an informal settlement. As the user transitions from the first "dome" space to the second, they find themselves in a space that is bordered by thin vertical columns or "wires to represent being trapped". This connects to Mbulelo's narrative where he felt trapped by poverty:

> ...growing up in the township you feel trapped that people don't believe you're going to make it. They don't believe in your dream. They just say you're dreaming [...] You just want to see the outside world, but you feel trapped because of your background or disadvantage. (Final model presentation, Mbulelo, 30 August 2017).

In widening the project brief to encourage students to bring their own resources into the landscape architectural classroom, Mbulelo has taken a "risk" to make visible experiences and contexts that may have been previously disregarded in these formal educational

settings. Mbulelo not only identifies and abstracts his own personal experiences, such as feeling trapped, he redesigns these through three-dimensional spatial-making practices that can be experienced by the imagined users visiting his installation. In moving away from conventional forms and archetypes, Mbulelo contributes to the diversity of available spatial forms and designs.

Mbulelo takes a risk by acknowledging the darker moment of "success" in his narrative. In order to represent his varied experiences of success, Mbulelo draws on conventional compositional resources such as colour, shape, angle and arrangement. He does, however, redesign these traditional resources. In the second section of his model, representing the aspirations of his narrative, Mbulelo designs a space that is distinct from the first half of the movement route. At the moment of transition between the black ground plane and the white ground plane, he introduces a change in level. This signifies Mbulelo's ambitions in his narrative to "climb up" and also represents that "there's a change". The pathway is covered by a sky plane above, providing shelter to the user. The pathway in this second section, while moderately enclosed by a sky plane, is open on all sides, allowing light into the space and ensuring high visual permeability. In addition to the level change and sky plane, Mbulelo also uses contrasting colours and high colour saturation to reinforce the change in the second section of his model: "I used ... bright colours to show success". This second space also includes black triangles that Mbulelo explains represent "a superstition in our cultures ... that if you become successful as a black male ... there's like witchcraft. So that represents if you're successful, maybe people are going to try to bring you down". He made a similar comment in an earlier crit: "once you get money … you're starting to have a lot of cousins". The reference to "lots of cousins" is colloquially referred to in South Africa as "black tax": the financial burden of upwardly mobile black South Africans to support extended family members. Mbulelo draws on shape as a resource to represent this aspect of his narrative. The sharp angles of the triangle and the way that they are arranged "pointing" towards the moment of "riches" in Mbulelo's model may reflect his own apprehensions of the financial expectations of his family and community. Mbulelo brings these contentious aspects of "success" into his spatial model design.

Mbulelo's narrative is a reminder of the stark differences between the context and environment of an informal settlement and that of the landscape architectural classroom as well as the types of spaces typically designed in landscape architecture. Throughout the spatial model project, Mbulelo draws on his own experiences, knowledge and resources and explicitly brings these into his design trajectory. He mobilises the resources he brings with him and takes up new resources such as landscape architectural design practices and metalanguage. In his final model presentation, he uses phrases such as "spatial experience", "represent" and "elevation" showing that he is adopting and using the metalanguage of landscape architectural discourse. Mbulelo is an example of how students successfully negotiate risk and remake and recontextualise landscape architectural design practices through their own experiences. A multimodal pedagogy that promotes different "orders of visibility" (Kerfoot & Hyltenstam, 2017: 7) of students' resources in the classroom not only provides access to the dominant discourse, but also enables students to contribute to new knowledge production. The transformation of Mbulelo's diverse resources results in innovative spatial experiences and expands on what and how landscape spaces can mean.

4. CEBISA: RISK IN DESIGNING SPACE THROUGH CONFRONTING FEARS

Cebisa is a young woman in her early twenties who had been working in the civil construction sector before coming to study landscape architecture. Cebisa is unusual in her approach to spatial form generation. She negotiates risk through her choices of materials and often uses materials in an unconventional way. Cebisa's design trajectory is similar to Mbulelo's. Her earlier models tend to use typical landscape design conventions, but there is a visible shift in her third and fourth models where she begins to draw more strongly on her own resources and engages with "riskier" design practices, materials and forms. The "risk" here can be understood in terms of choosing resources that may have been invisible or unnoticed in the past. Through her trajectory, Cebisa rethinks landscape architectural design practices and redesigns new types of spaces.

Cebisa's narrative is about overcoming fear. Her narrative is inspired by her own decision to study landscape architecture: "I was afraid of what is landscape. What am I going to do? What is it about?" (Graphic narrative presentation, Cebisa, 24 July 2017). Through her narrative, Cebisa describes how "fear basically deprives us of the things that we could achieve as a person". Cebisa explains that people who choose to confront their fears may overcome them and achieve success. They may realise "I did it in the end without anyone helping me [...] why was I even afraid the first time?"

In Cebisa's first two models she hesitantly represents themes such as "fear" and "uncertainty" through conventional landscape resources. In her first model she makes a play park that includes a slide, a bench and a tree, but these only loosely connect to her narrative. Cebisa's second model begins to take more risks in terms of unusual design features, such as a bumpy or textured pathway and a pergola covered in barbed wire in order to express her narrative of fear. Cebisa's first two models may represent what she perceives to be "acceptable" and "low-risk" design forms. As a young designer with limited design experience and landscape precedent, Cebisa makes three bold design choices in her third model. Firstly, she begins to move away from "named" landscape archetypes. Secondly, she uses unusual materials and thirdly, she constructs her own "way in" to her model design through a series of questions and envisaged experiences for the imagined users of her model.

Instead of abstractly representing themes in her model as conventional spaces or forms, Cebisa's design process is shaped by her own debates around fear and how this translates into the way a user may negotiate their movement and interaction with her model. Cebisa's narrative about challenging perceptions and confronting fears is embedded in her final model through interpersonal resources such as spatial engagement as well as textual resources including salience, coherence and texture. Her design process is unconventional and represents risk in terms of moving away from formulaic ways of approaching design and making. The way she expresses her argument centres around the user, their degree of interaction and choices that they may make. "In all types of spaces, the users are part of the interactive framework and can respond to the space by either accepting or challenging the semiotic design" (Ravelli & McMurtrie, 2016: 86). Cebisa's model design challenges users to overcome their perceptions and engage with the spaces in the model.

Figure 2. Cebisa's final model

Cebisa's final spatial model design presents the user with four choices of movement routes. At the back of the model is a cave-like space with a red, textured ground surface (see figure 2). This bright colour may signal to users that there is a space to be investigated. Users may choose to walk around to the back of the model to explore this space, but as Cebisa explains "you [...] see there's actually nothing interesting there. It was something just to fool the people, who were always in the comfort zone, trying to use the easy ways" (Final model presentation, Cebisa, 30 August 2017). Users could also choose to walk underneath the ladder where there is a white, soft ground surface. Cebisa describes this space as the "comfort zone" for users who may be too afraid to climb the ladder and engage with a difficult experience. She imagines users debating "'Will I just stay here or just maybe try and take the ladder to go and see what's on top?' Or you can just stay here be like, 'Okay, I'm just fine with whatever I have'". Users may also choose to walk up a short flight of stairs. Cebisa has designed this for users who are "always afraid to try new things, to try and experience new things" and miss out on an opportunity to discover the upper level. From the vantage point at the top of the stairs, Cebisa imagines users may be able to see the foil texture on the upper level and may be motivated to climb the ladder: "that will challenge them to go, actually to go down and try to climb the stairs and to see what's the foil. 'What's this thing that's shining on top?'".

Once the three options are exhausted, users may choose to climb up the ladder, but Cebisa does not make this an inviting option. She uses texture to suggest that objects may be intriguing or deceptive. She imagines what the user might think or feel as they debate climbing the ladder: "You want to go there, but you're afraid to use the [ladder] because I used the [...] toothpicks here [...] and they think they might fall or they might break". Assuming the user makes it at least halfway up the ladder, Cebisa wonders if they might be discouraged by the shiny tinfoil texture or the wire attached to the black handrail.

> These spiky things [*points to wire on black handrail*] are just to fool them and try to manipulate their decision. Some people, some adventurous people will want to climb and [say] "What is this spiky thing? Is it really hard, or is it soft? Does it really shine that much?" But if you are afraid and you're not that adventurous, you're always in your comfort zone, you can just stay here and experience little things (Final model presentation, Cebisa, 30 August 2017).

If a user overcomes their fears and climbs the ladder, they may experience new textures and discover that these were not what they initially perceived them to be. The textured black strip on the upper level "looks rough but it's actually smooth". Cebisa has intentionally designed a heteroglossic and dialogically expansive spatial model (Ravelli & McMurtrie, 2016: 75): users have full access to every part of the model and are limited only by their own choices. The composition of the model enables unlimited access and user engagement, but the interpersonal and ideational meanings of the model are complex and may result in the user regulating or adapting their access and spatial engagement based on their own perceptions of the spaces, textures and materiality. This degree of spatial engagement invites users to challenge their perceptions and overcome their fears or hesitations.

It is evident that Cebisa's model is exciting and creative. We have shown how she designs a complex movement route, enticing users to explore and engage with her model and the narrative that it expresses. She uses spatial engagement and unusual uses of texture as semiotic resources to convey key themes in her narrative to her imagined users. She moves away from conventional landscape forms and design processes and takes on more risk as she explores and experiments with textures and perceptions. The way in which Cebisa puts herself in her users' shoes, asking questions such as "What is this spiky thing?" and "Will I just stay here?" shows how her user and their experience is at the heart of her spatial model design. These questions also prompt her own design processes and the diverse types of spaces and forms she creates. She brings her own resources into her learning environment and successfully manages risk as she designs new and unconventional forms and design practices.

Similar to Mbulelo's earlier models, Cebisa's early models rely on conventionalised landscape architectural elements such as parks, slides and trees. As Cebisa moves forward in her trajectory, she moves away from these conventions and uses her own debates and resources to shape the forms and spaces she designs. Her own resources and experiences are represented more strongly than tentative attempts at using "landscape" elements. Moving away from forms and practices associated with the dominant landscape design practices may be considered "risky". The risk that these two students take in bringing their diverse experiences into the landscape classroom is acknowledged in the light of a history of colonised education where diverse resources and experiences were often disregarded or devalued. The high levels of engagement that these students demonstrate in their design trajectories reveal the importance of making a connection between diverse contexts and the landscape architectural classroom.

5. DRAWING ON RISK TO DEVELOP A MULTIMODAL PEDAGOGY FOR DIVERSITY

We have examined the different ways in which two students draw on and transform experiential resources into the design of spatial experiences in their models. Mbulelo draws on unconventional contexts in his design and Cebisa draws on unconventional materials to represent abstractions. We have argued that uncritical landscape architectural pedagogies that grew out of Global North perspectives, when applied to Global South contexts, could privilege particular resources or meaning-making practices and exclude and silence others. In light of decolonising education movements, there is a responsibility for landscape pedagogies to not only notice, but to validate diverse resources and design practices (Archer & Newfield, 2014; Stein, 2008).

In adapting the project brief to increase the variety of resources that students could draw from, students such as Mbulelo and Cebisa have designed diverse, rich, layered landscape architectural spaces and experiences for their users. These students show that when students engage in meaningful ways with their designs, there is immense potential for learning and knowledge production. In the process of learning, students are remaking and reframing landscape architecture in new and diverse contexts. They are negotiating the "contact zone" (Pratt, 1999) between their own experiential resources and those of more conventionalised architectural practices. We have described the changes in "risky" materials for model-building and how this impacted the design of landscape spaces and forms. This has led us to propose three principles for drawing on risk to develop a multimodal pedagogy of diversity.

5.1 Recognition of diverse students' resources

Recognition is more than "noticing" students' resources, but a pedagogical approach that can theorise resources through a metalanguage and integrate the use of diverse resources into the classroom (Archer & Newfield, 2014: 5). Kerfoot and Hyltenstam (2017: 7) describe this notion of recognition as constructing "different orders of visibility" that not only provide connections between the landscape classroom and students' everyday lives but notice absences and endorse resources that may have been previously unnoticed (Archer & Newfield, 2014). Recognition is thus an antidote to a single perspective pedagogy and the imbalances this has produced in the past.

5.2 Recognition of resourcefulness as design precedent

Novice landscape architectural designers do not need to be labelled in terms of low design exposure to landscape precedent. Although students may not be armed with well-acknowledged (design) resources, their own experiential, social and interactive resources are more than adequate substitutes to the successful design of spatial experiences. Furthermore, the unconventional use of diverse material and non-material resources has the potential to innovate and disrupt landscape architectural design practices and contribute to the production of knowledge.

5.3 Engagement in the "contact zone"

Designing pedagogies that encourage students to draw on their own resources involves risk for the teacher and the students. Responsible pedagogies provide a space for students to successfully negotiate their own resources in order to access and transform dominant ways of knowing. We need to go beyond just noticing students' diverse resources by celebrating and encouraging the use of these resources. Successful engagement in the "contact zone" (Pratt, 1999) between students' resources and the landscape architectural discourse results in the transformation of resources, producing new and diverse landscape architectural forms and spaces. The remaking and redesign of landscape architectural design education needs to draw on diverse students' resources that can act as a foil to the single dominant perspective.

We have argued that a multimodal pedagogy that embraces risk as productive can develop classrooms as sites of transformation, where students are empowered to employ their diverse semiotic resources in productive and transformative ways to engage with the curriculum. In this view, diversity is seen as an opportunity, rather than an obstacle (Gee, 1996; Gomez, Puigvert & Flecha, 2011). Multimodal pedagogies for diversity have been explored in a range of educational sites in South Africa, including Health Sciences (Weiss 2014), Engineering

(Simpson 2014), jewellery design (Salaam 2017), music (Harrop-Allin 2011) and English (Stein 2008). The classroom environment (and not only that of landscape architecture) needs to juxtapose discourses in order to interrogate how particular knowledge has been constructed, why particular types of knowledge have been valorised and to challenge or negotiate new meanings. An approach to pedagogy that embraces "risk" has the potential to respond to the scars of South Africa's colonial, segregated and exclusive past by promoting inclusive, democratic classroom environments where all voices are valued equally (Stein, 2008: 3).

6. FINAL COMMENTS

This paper has shown how two students successfully took a "risk" through drawing on experiential resources as prompts that were transformed and redesigned into their spatial models. This mobilisation of resources is pedagogically important in terms of students negotiating their way into the landscape design discipline. We highlighted the ways in which the students contextualised landscape architecture in terms of their own experiences; how they used their resources as prompts to engage with landscape design trajectories and space-making and to design meanings and spatial experiences for the imagined users of their models. Analysing the students' spatial models reveals firstly, the types of resources that may have been invisible in the past and secondly, the potential for students to draw on diverse resources in order to access and recontextualise the dominant landscape architectural discourse. Landscape conventions and practices are mediated to students through the spatial model project and students need to carefully negotiate the "contact zone" (Pratt, 1999) between their resources and these conventions.

The concept of risk has been framed within a multimodal approach to pedagogy which recognises the value of diverse experiences, voices and resources of students in order to access and challenge dominant design practices. We believe that this is applicable to educational contexts other than landscape architecture – wherever teachers wish to implement and strengthen the semiotic practice and democratic culture. A pedagogy that embraces risk as productive can recognise and validate the rich knowledge, resources and experiences that students bring with them to their learning environment. In doing so, this pedagogical approach begins to address past educational imbalances and inequalities, thus opening up spaces for diverse perspectives. However, embracing diverse students' resources is not unproblematic. Multimodal pedagogies for diversity carry a double burden: it would be unjust to create "safe" educational spaces that value diverse students' resources if these students cannot gain entry to the dominant discourse and the social and economic prosperity it governs. The students, however, have the agency and potential to realise change in the profession and its dominant discourse. It is thus important to create learning environments that not only foster multiple perspectives and valorise diverse resources, while also providing access to dominant discourses, but also to help students realise their potential to change the discipline and profession. This may require a shift in the role of the educator "from provider of authoritatively held and dispensed knowledge to designer of apt environments for learning" (Bezemer & Kress, 2016: 134). The aim is not to develop a pedagogy that adapts to the majority of the students, but to develop a pedagogy that goes beyond, ensuring that diversity does not become a barrier to success.

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