



ARTIST HANNELIE COETZEE'S WORK AT THE NIROX SCULPTURE PARK: HOW ART DRAWS ATTENTION TOWARDS COMPLEX SCIENTIFIC ISSUES

[NIROX Foundation](#)

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During her residency in 2012 at Nirox Sculpture Park in the Cradle of Mankind, artist Hannelie Coetzee stacked 128 stone cairns on top of each other to create an artwork which she titled *Buigkrag*. She used the contemplative stacking and balancing process to engage with the landscape and draw attention to the sculpture park's wider boundaries.

Benji Liebmann, founder of the Nirox Sculpture park, pointed out that, "here we are in the middle of a UNESCO World Heritage Site where mining waste contaminates the water and the idea for a multi-functional art work was born".

The existing artwork

Coetzee's *Buigkrag* (which means 'The Strength it Takes to Bend Something as Far as it Can Go') is a large-scale, land-art piece, comprising hundreds of boulders, which aptly captures the sense of witnessing a moment-before-movement. Intended as a meditation on the relationship between industrialisation and the natural/aesthetic world, the boulders are stacked into a series of cairns, slanted precariously towards the electricity pylons on the site. This prompts a reconsideration of whether any physical manifestation of contemporary life in nature would necessarily be seen as evidence of humans' intrusion on the ideals of natural and aesthetic beauty, or whether it could also serve as a reminder that co-habitation, when accepted and honoured, will have better prospects for averting the abuse of natural resources."

The collaboration to build a new artwork

Coetzee invited a group of University of the Witwatersrand (WITS) scientists on researcher Isabel Weierbye's team from the Woodlands Project to attend a 'pipeline' walkabout along the Blaauwbank river running through the sculpture park on 12 May 2013 to view the acid mine drainage repercussions and respond to it. "The major achievements of the Wits (Woodlands) programme to date, have been significant improvements in slimes dam rehabilitation methods for seepage and dust control - and a significant reduction in the cost of slimes dam rehabilitation. A social ecologist and Phyto-remediation scientists participated in the walk with intending to create collaborative functional public artworks using the innovative research the scientists were working on.

What can art and science do for each other?

Functional artworks can benefit science by supplying visual (and accessible) representations of their sometimes complex work to outsiders and the general society by connecting disciplines which have been working independently since the Renaissance Period. Interdisciplinary approaches to problem solving such as this is similar to how Eco systems absorb, digest and approach problems. Coetzee bases her approach to problem solving through art on the Biomimicry methodology. It's an approach that uses a first principal's scientific lens to

resolve an issue through nature's logic and to inform the aesthetics of the functional artwork. Art and science collaborations work well because they both:

- Value the careful observation of their environment to gather information through the senses,
- Value creativity,
- Propose to introduce change, innovation and improvement over what exists,
- Use abstract models to understand the world and
- Aspire to create works that have universal relevance.

Coetzee is studying Social Entrepreneurship at the Gordon Institute of Business Science this year through a grant by the Rand Merchant Bank. The course is aimed at mid-career expansion through studying interdisciplinary areas to unblock social and environmental change issues. Her focus is to use environmental paradoxes as a subject, and base the design of the site specific artwork informed aesthetically through scientific research.

Collaborative scientific pilot projects planned for the Nirox Foundation will grant WITS science students a site in the cultural spotlight. The postgraduate students will be able to take measurements for demonstrating how well the various water treatments work.

Conclusion

Using scientific research in art can extend the reach of artwork, and in this case, it can help conserve biodiversity by introducing an art based on innovative scientifically researched water management options.

Art gets center stage again as a cultural attraction which draws attention towards solving complex human issues. Water is also used as an art medium and developments through the artwork and the innovation it highlights draws attention to the age we're living in. The sustainability of such a sculpture park gets enhanced by functional artworks. The wider community will reap the benefits of social ecology and cleaner water and educational awareness..

The South African National Arts Council seed funding has been awarded to Coetzee's early research phases of this collaboration. The pilot artworks can be used as models to explain the scientific concept at academic conferences and other communications platforms. The artwork/s would be scalable upon request with the right social investment partners. Coetzee's methodology to work collaboratively with scientists can be replicated on other sites, specifically to create more functional artworks that draw attention to environmental dialogues.

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