

# University greenhouse and Botanical park

cohesion of a research typology and the metaphysics of space

by Gerrie Venter



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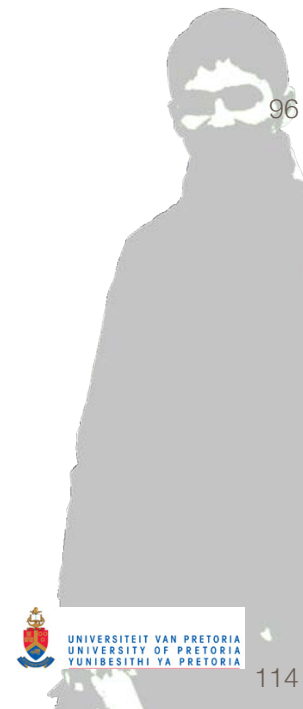
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*"Like the rain that's falling,  
Like the wind that's blowing,  
Like the sun upon my face  
I feel the warmth in your embrace  
You are everywhere."*

Thank you to my Christ and Savior. For You led me to see that creativity is one of the greatest gifts of all, to be used with humility, integrity and responsibility.

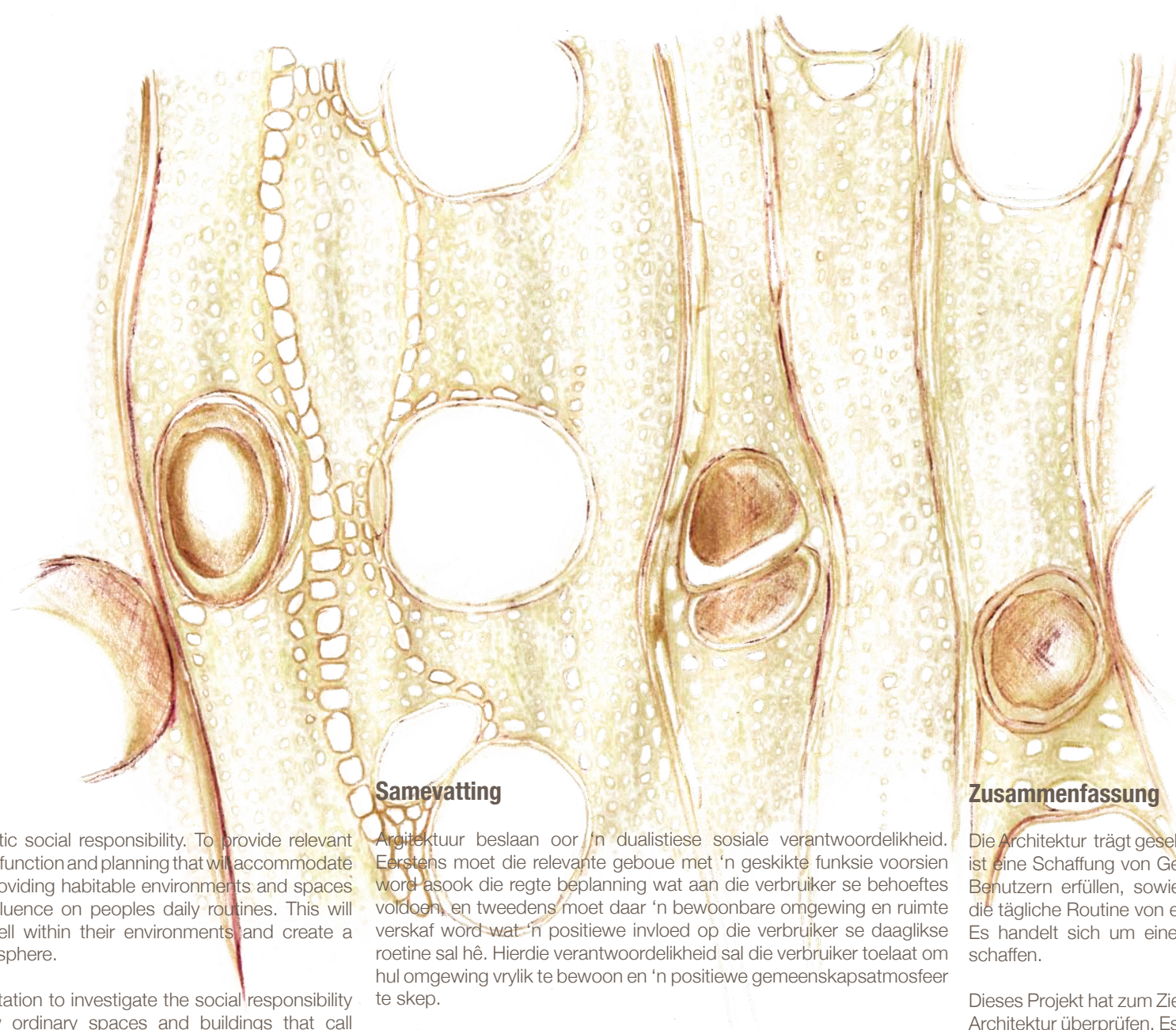
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The class of 2008

**Image on the right:** Transverse section through a piece of living Mahogany tree branch enlarged 400 times. It shows bundles of tubular cells that makes up the tree's vascular system, responsible for carrying water and nutrients from the soil. Drawing by author





## Abstract

Architecture has a dualistic social responsibility. To provide relevant buildings with appropriate function and planning that will accommodate user needs, as well as providing habitable environments and spaces that will have positive influence on peoples daily routines. This will allow users to freely dwell within their environments and create a positive community atmosphere.

It is the aim of this dissertation to investigate the social responsibility of architecture and how ordinary spaces and buildings that call for pragmatic design solutions can also enter into the realm of the metaphysical spatial experience and to find cohesion between the two.

The selected project is a glasshouse complex and plant containment research facility within the Botanical gardens at the University of Pretoria, South Africa.

## Samevatting

Argitektuur beslaan oor 'n dualistiese sosiale verantwoordelikheid. Eerstens moet die relevante geboue met 'n geskikte funksie voorsien word asook die regte beplanning wat aan die verbruiker se behoeftes voldoen, en tweedens moet daar 'n bewoonbare omgewing en ruimte verskaf word wat 'n positiewe invloed op die verbruiker se daaglikse roetine sal hê. Hierdie verantwoordelikheid sal die verbruiker toelaat om hul omgewing vrylik te bewoon en 'n positiewe gemeenskapsatmosfeer te skep.

Die doel van hierdie verhandeling is om die sosiale verantwoordelikheid van argitektuur te ondersoek, asook die wyse waarop gewone ruimtes en geboue wat pragmatiese ontwerpopslossings verlang ook die terrein van die metafisies-ruimtelike ondervinding kan betree en 'n verband tussen die twee paradigmas te vind.

Die uitgekose projek is 'n glashuiskompleks en plantinperkingsnavorsingsfasiliteit binne die botaniese tuine by die Universiteit van Pretoria, Suid Afrika.

## Zusammenfassung

Die Architektur trägt gesellschaftlich dualistische Verantwortung: es ist eine Schaffung von Gebäuden, die räumliche Bedürfnisse von Benutzern erfüllen, sowie auch einer qualitativvollen Umgebung, die tägliche Routine von einer Gemeinde positiv beeinflussen wird. Es handelt sich um eine freundliche, gemeinde Atmosphäre zu schaffen.

Dieses Projekt hat zum Ziel die Gesellschaftsverantwortung von der Architektur überprüfen. Es wird untersucht, wie vernünftige Räume, die eine Antwort für die funktionelle Bedürfnisse sind, gleichzeitig eine metaphysische Erfahrung kreieren können. Die Idee ist ein Zusammenhang zwischen diesen zwei Ansätze zu identifizieren.

Das ausgewählte Projekt ist eine gegenwärtige Gewächshäuseranlage, Forschungsanstalt und botanischer Garten auf dem Gelände der Universität Pretoria