

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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Faculty of Engineering
Department of Architecture

BEYOND THE PHILOSOPHY OF BIOMIMICRY IN ARCHITECTURE: A MODEL TO SHIFT FROM THEORY TO PRACTICE

A thesis submitted as part of the requirements to obtain the degree of Doctor of Philosophy in Architectural Engineering

Presented by

Sara Samy Mahmoud Khalifa
M.Sc., Architecture
Faculty of Engineering, Ain Shams University, 2014

Supervisor Committee

Prof. Dr. Morad Abdelkader

Professor of Architecture & Environmental Control, Faculty of Engineering, Ain Shams University

Dr. Wafaa Nadim

Associate Professor, Faculty of Engineering and Material Science, Architecture and Urban Design Programme, German University in Cairo

March 2020



Ain Shams University Faculty of Engineering Department of Architecture Engineering

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Submitted by
Sara Samy Mahmoud Khalifa

Examiners Committee

Signature

Professor Dr. Abbas ElZafarany

Professor of Urban Design—Urban Design Department Faculty of Urban and Regional Planning- Cairo University

Professor Dr. Shaimaa Kamel

Professor of Architecture-Architecture Department Faculty of Engineering- Ain Shams University

Professor Dr. Morad Abdelkader

Professor of Architecture & Environmental Control Faculty of Engineering- Ain Shams University

Prof. Dr. Wafaa Nadim

Associate Professor, Faculty of Engineering and Material Science, Architecture and Urban Design Programme, German University in Cairo

Thesis Defense Date: 22/3/2020

Graduate Studies:

Approval	:
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Date:/..../....

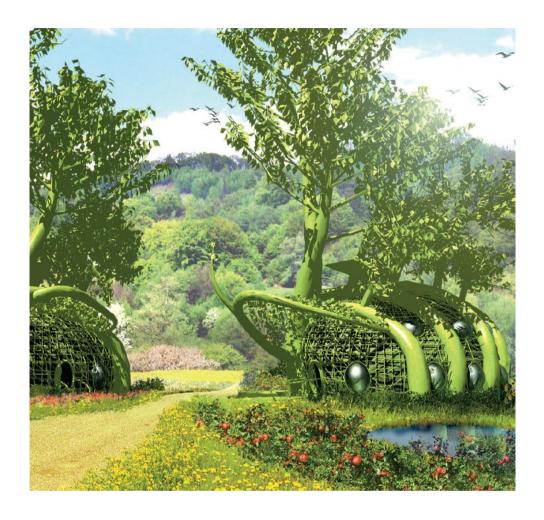
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بسم الله الرحمن الرحيم

"إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِّأُولِي الْأَلْبَابِ"

صدق الله العظيم



'From my designer's perspective, I ask: Why can't I design a building like a tree?

A building that makes oxygen, fixes nitrogen, sequesters carbon, distils water, builds soil, accrues solar energy as fuel, makes complex sugars and food, creates microclimates, changes colours with the seasons and self-replicates.

This is using nature as a model and a mentor, not as an inconvenience.

It's a delightful prospect...'

(McDonough and Braungart, 1998)

STATMENT

This thesis is submitted to Ain Shams University for the degree of Doctor of

Philosophy in Architecture.

The work included in this thesis was accomplished by the author at the

department of Architecture, Faculty of Engineering, Ain Shams University,

during the period from September 2015 to March 2020.

No part of this thesis has been submitted for a degree or a qualification at

any other university or institute.

Date: 22nd March 2020

Signature:

Name: Sara Samy Mahmoud Khalifa

M.Sc. of Architecture-2014

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