

ERRATICS

AUGMENTING LANDSCAPE DYNAMICS

THEORETICAL RESEARCH
+ PROPOSAL
FOR A LANDSCAPE EXHIBITION

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Engineering



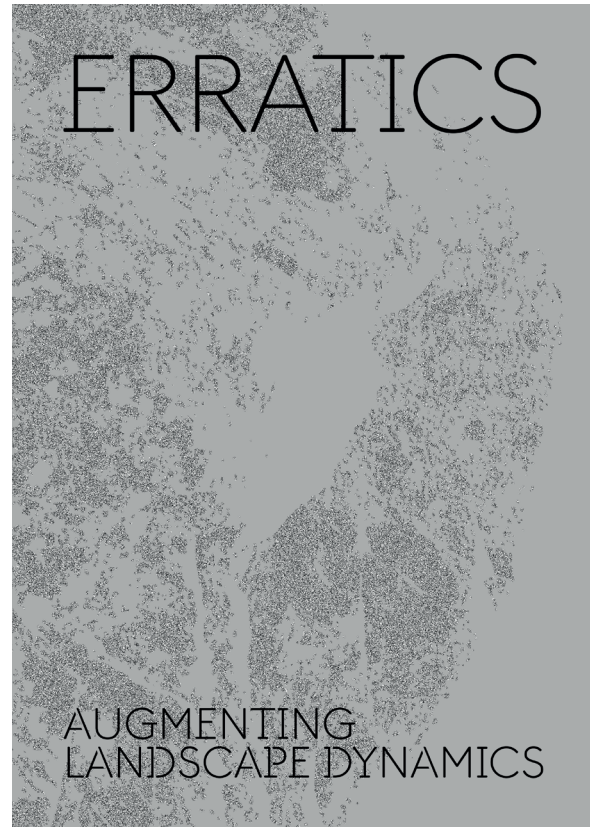
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THESIS PARTS

THIS THESIS IS COMPOSED OF 2 PARTS:

1) A THEORETICAL RESEARCH BOOK AND 2) AN EXHIBITION PROPOSAL

PART 1



A THEORETICAL RESEARCH BOOK

PART 2



AN EXHIBITION PROPOSAL

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INTRODUCTION

THEMES

Glacial Erratics, Geology, Geosite
Landscape Perception
Post-human Design
The Anthropocene, Climate Crisis, Urbanization
Glaciers, Last Glacial Maximum, Glacial Processes

ABSTRACT

During the last glacial maximum (115,000 to 10,000 years ago), as glaciers powerfully advanced, ice carried boulders as relics of their journey. When the glaciers eventually receded (~19,000 years ago), they left behind displaced boulders, called erratics, scattered across unfamiliar landscapes.

Throughout time, erratics radically augmented our perception of landscape dynamics by (1) rescaling our relationship with the environment, (2) amplifying cultural narratives and (3) enabling scientific discoveries (e.g. catalysts for grasping Earth's deep time and climate change). Still, glacial erratics have been destroyed, hidden, or 'lost' over time due to agricultural expansion, colonial structures of power, quarry extraction processes, and most recently, urbanization projects.

In the midst of the 6th mass extinction, as glaciers continue to retreat and an erratic, unpredictable future persists, glacial erratics emerge as powerful tools for expanding our capacity to navigate and respond to complex & uncertain contemporary landscapes.

AIM

Glacial erratics have historically radically augmented our perception of landscape dynamics, yet there is currently not much interest in these special boulders. The aim of this thesis was to explore how erratics possess the potential to enhance landscapes by emphasizing unique landscape dynamics across the past, present, and future. Therefore, glacial erratics could serve as powerful design tools for landscape architects and other designers to expand our capacity to navigate and respond to complex & uncertain contemporary landscapes.

METHODOLOGY

The research is developed through two interconnected sections:

Section One — Landscape Augmentations

First, an essay that examines and conceptualizes a variety of "Landscape Augmentations" produced by glacial erratics. These augmentations are explored through three main lenses: Scale, Time, and Cultural Narrative.

Section Two — An Erratic Geosite

Second, these augmentations are projected onto site-specific case study that together with an erratic index create "An Erratic Geosite" — a global collection of different glacial erratic boulders that augment unique landscape dynamics.

Introduction

THE CONCLUSION

In conclusion, this thesis has explored the ways in which glacial erratics augment landscapes by bringing distinct landscape dynamics into focus. Through the lenses of Scale, Time, and Cultural Narrative, the augmentations created by the erratic boulder broaden our understanding of complex and, at times, overwhelming landscape dynamics.

In examining the way erratics augment landscapes through scale, erratics manifested as tools for recalibrating our sense of proportion within the vastness of landscapes. In the micro-scale we looked at examples of erratic boulder islands, unique and small-scale ecological islands. At the human scale we saw examples of photographic illusions created as people try and size themselves against the boulders (e.g. pretending to push the erratic or hold it up with our hands). Lastly, in the global scale, we found that erratics have the power to rescale our relationship to the different dimensions composing the landscape. Moreso, as a design tool, erratics help us rescale our relationship to our environment thereby shifting our human-centered perspectives.

Augmentations of time revealed glacial erratics as catalysts for scientific discoveries that expanded our perception of Earth's deep time and climate. They historically acted as guides to understanding ancient climate fluctuations, challenging and expanding our perception of time within the landscape. This is specifically useful as the anthropocene, marked by rapidly changing climates and landscapes, challenges us to confront a disorienting perception of time. By integrating these erratics into the design process, we're prompted to challenge notions of stability and permanence, embodying resilience within contemporary landscapes shaped by ecological shifts and climate changes.

Augmentations of cultural narratives emphasized why and how erratics amplify cultural narratives, embodying and reflecting simultaneous and diverse cultural perspectives. Naming conventions, folklore, and interactions between humans and erratic stones illustrated the rich tapestry of narratives that erratics contribute to. Erratics challenge the notion of a singular narrative, instead they represent a conscious shift toward a dynamic world, one that is seen, felt, heard, and continually evolving.

Crucially, the thesis demonstrates that glacial erratics do not merely augment individual dynamics within landscapes but connect and layer them within a new projection of the landscape. The erratic, both in its geological definition and as a symbol of the unpredictable, becomes a lens to bring new perspectives into focus. In a world grappling with chaos and uncertainty, the erratic expands our capacity to embrace the complexity and uncertainty of our reality.

As a tool for designing future landscapes, glacial erratics support a post-human design philosophy that welcomes the uncertainties of our future. Rooted in acknowledging both ecological and cultural intricacies and the impermanence inherent in our inhabited landscapes, they guide us to understand that embracing complexity equips us to navigate the evolving nature of our planet. In doing so, we gain the insights needed to craft designs that are not only resilient and adaptable but also environmentally conscious.

Conclusion