CYCLES

Geological and Cultural Resonances along Iceland's Golden Circle

The title of this traveling studio, CYCLES, acknowledges a paradigm shift; a significant departure from the dichotomous depiction of landscape architecture as a dynamic series of regenerative processes, and architecture as a static accumulation of constructive phases. Rather, with attention directed toward recent advancements in technologies that provide innovative visualizations of patterns of transformation within our environment, CYCLES aims to induce architectural design tactics which establish a mutually-dependent relationship between 'life-cycles' of buildings and 'cycles of life' in landscapes.

CYCLES will operate with the awareness that increasingly architectural design can be understood as the management of interrelations between multiple dynamic systems—those which occur naturally and those which are designed and implemented synthetically. The greater site of the studios' investigation is Iceland, which presents itself as a prime laboratory for extreme ecological change, geological transformation, biological development and meteorological activity. The specific sites of the studios' design research occur along The Golden Circle, an ecotourism route which outlines a myriad of geological phenomena including volatile displays of hydrological, volcanic, and geothermal activities. The design problem posed in CYCLES will require the design of an interrelated network of ecotourism outposts along The Golden Circle, and the planning of its corresponding infrastructure for the potential of future sustainable development. The studio's broader ambition is to propose design strategies which suggest alternative resonances between the inevitability of geological transformation and the necessity of cultural development.

Image: Laki - Part of a volcanic fissure system that abides by a cycle of activity that causes a string of eruptions approximately every 850 years. The last eruption, which occurred in 1783, had catastrophic effects in Iceland and its impact was harshly felt throughout Europe for several years. It has been regarded as one of the most significant socially-, and culturally-repercussive events of the last millennium causing substantial population depletion in Europe due to famine—a result of the unusually high levels of sulfur dioxide. "The meteorological impact of Laki resonated on, contributing significantly to several years of extreme weather in Europe. In France a sequence of extremes included a surplus harvest in 1785 that caused poverty for rural workers, accompanied by droughts, bad winters and summers, including a violent hailstorm in 1788 that destroyed crops. This in turn contributed significantly to the build-up of poverty and famine that triggered the French Revolution in 1789."

- Richard H. Grove, Nature 393 (1998).

Expanded Statement - The combination of the volatile geological conditions of Iceland and its rapidly shifting developmental status produces a scenario which acts as an augmented representation of similar circumstances in many parts of the world. Faced with the mandate of developing a more robust ecotourism infrastructure, architectural designers are being charged with the challenge of amending seemingly contradictory systems—those which are driven by ecological processes and those which are driven by processes of urbanization. CYCLES aims to establish interstices between existing and invented organizational systems by (1) privileging a conceptualization of 'site' as dynamic, ever-transforming and time-based processes, while (2) developing 'design' relationally, conditionally and tactically.

Prior to departure, students will be familiarized with the current developmental ambitions of Iceland by researching recent international design competitions sponsored by Iceland officials. These include the 2005 Vision Akureyri International Design Competition for Northern Iceland which looked to relink the environmental features of Eyjafjordur, Iceland's longest fjord, with the cultural prospects of urbanization, as well as the more recent Vatnsmýri International Design Competition which focused on redevelopment opportunities of defunct airport landing strips. Also during this preparatory phase, collective student research will be directed toward the creation of provisional codification techniques for the site's ecological, geological, biological, meteorological systems. Building from existing maps and current geographic information systems, students will invent synoptic mapping methods—simulations—highlighting changing conditions over several different scales of time.

Travel within Iceland's The Golden Circle will expose students to the tangible implications of its geological variation and volatility on processes of infrastructural development and urbanization. One portion of the trip will provide an introductory and historic ecotour including time at Iceland's major geological features; Thermal Baths at Blue Lagoon, Thingvellir National Park, Oxararar River, Thingvellir Lake, the Lava Fields, and Gulfoss. Students will further articulate analytical mapping techniques begun prior to departure based on in-field verification. The second portion of the trip will be spent at several sites along The Golden Circle empirically documenting the specific sites of the studio. Engagement with Reykjavik officials interested in expanding the ecotourism potential of Iceland will be essential to the students' understanding of the country's developmental and economic agenda. During this portion of the trip, students will be asked to formulate a position regarding the potential role of ecotourism as a foundational organizational strategy for the future sustainable development in Iceland.

Upon their return, students will design parametric models which reference specific 'cycles'—documented temporal characteristics—such as ecological, geological, biological, and meteorological systems. These relational models will form the basis of the organizational potential of a masterplan for architectural interventions that line The Golden Circle. The models will be responsive to changing field conditions and will privilege architectural strategies that register time-based processes. Students will invent novel systems of organization at the intersection of visual and spatial fields, with the promise of eliciting new formations capable of providing diverse urban ecologies and alternative architecturally-performative characteristics. The studio will explore flexible part-to-whole relationships that can differentiate to produce adaptive architectural organizations. The mapping and simulation techniques developed as collective studio research will comprise the first half of the materials for a summation exhibition, followed by individual student designs for outposts strategically distributed along the The Golden Circle.

Airfare - 13 people @ $1000 per round trip ticket	$13,000.00
Lodging - 13 people @ double occupancy for 1.5 weeks	$3,000.00
Ground Transportation in Iceland	$1,000.00
Exhibition Design and Production	$3,000.00
Total Request	**$20,000.00**

Biography - William O'Brien Jr. is Assistant Professor of Architecture at the MIT School of Architecture and Planning and is principal of an independent design practice in Cambridge, Massachusetts. His research and creative practice have been fostered by an interest in relationships between architecture, technology, landscape, and urbanism with an emphasis on the development of alternative resonances between natural and artificial systems.

O'Brien pursued his graduate studies at Harvard University, where he was the recipient of the Master of Architecture Faculty Design Award. Prior to graduate school, he attended Hobart College, in New York where he studied architecture and music theory and was the winner of the Nicholas Cusimano Prize in Music. After completion of his graduate work, he travelled to Austria and Germany as the recipient of the Hayward Prize for Fine Arts Traveling Fellowship in Architecture, sponsored by The American Austrian Foundation. O'Brien has taught previously at The University of California Berkeley as a Bernard Maybeck Fellow in 2005-2006, and was the LeFevre Emerging Practitioner Fellow at the Ohio State University in 2006-2007.

Until recently he was Assistant Professor at The University of Texas at Austin where he taught advanced theory seminars and graduate level design studios themed around the interstices of landscape and architectural systems. Last year he taught a graduate studio entitled 'Configured Grounds: Venice Lagoon Prototypes' in which students developed strategies for architectural and landscape organization that contributed to the ecological and economical revitalization of the Venice Lagoon. The studio focused on the planning of landscape surfaces in order to reintroduce natural processes into the site while embedding an infrastructural framework for ecotourism. O'Brien also recently taught an advanced graduate studio with visiting critic Michael Kubo, entitled 'Mat-Systems & Material-Organization: Silicon Hills Technology Park' which focused on developing landscape-embedded, parametrically-organized mat-buildings. The studio examined the potential of flexible modularity and differentiated repetition in a contemporary version of the mat-building typology, specifically through the design of a corporate campus. Themes explored in these studios parallel those which have been developed theoretically, historically and critically in an advanced theory seminar O'Brien teaches called 'Analysis of Contemporary Formalisms.'

Last year he was named a MacDowell Fellow by the MacDowell Colony in Peterborough New Hampshire, an artist and writers' residency program supporting creative research. In May he was selected as a Socrates Fellow by the Aspen Institute for contribution to a seminar about sustainable technologies and design. His recent publications include essays in Log Journal, and ACADIA re:Form. He is currently assembling a collection of sixteen original essays for a book project which offers theoretical observations and design strategies toward the development of alternative resonances between natural and built environments.

Studio Aspirations at MIT - The MIT School of Architecture and Planning is fantastically-situated to provide necessary resources and expertise to enable this studio to be ground-breaking. In preparation for CYCELS, key affiliations have been made with several members of other discipline groups within the MIT community; experts in digital visualization and environmental simulation from the MIT Media Lab, researchers advancing the potentials of parametric and algorithmic design from the Computation Group, as well as experts from the newly-formed Landscape & Urbanism Group within the City Design and Development Program. CYCLES will reap the benefits of a distinct and unsurpassed research culture at MIT; one which is known for its prompting of 'adhoc-alliances' across discipline groups in order to solve complex design problems. Architecture students will rarely have a similar opportunity to experience such a rich web of interdisciplinarity.