

Gaiatectonics: Toward a Geomorphological Psychoecology

Thesis Proposal

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Gaiatectonics: Toward A Geomorphological Psychoecology

Gaia: earth as a self-regulating organism

Tectonics: relating to connections and meeting of different elements

Geomorphology: the study of the forces that shape the surface of the earth

Psychology: the study of how humans think and feel

Ecology: the study of the relationships between different organisms and their environment.

Gaiatectonics: a new landscape-architectural language and philosophical position concerned with the harmonization of the man-made and the natural

Geomorphological Psychoecology: humans' psychological relationship to nature, influenced by geometries inspired by the non-anthropogenic processes that shape the surface of the earth.

Premises:

Environment influences psychology:

1. Humans perceive themselves as separate from nature.
2. According to cognitive psychology, neuroscience, and phenomenology, the environment influences the way people think, the way they feel, and the way they understand the world and their own identity.
3. Architectural psychology seeks to understand the psychological effects of the built environment on humans.

Humans are part of nature:

4. An ecological crisis exists, stemming from the antagonism of human civilization and the rest of the earth.
5. Humans and our creations are part of the unified ecology of plants, animals, and physical forces of the earth, despite the fact that we perceive ourselves as separate from nature.
6. Our actions are destructive to the rest of the ecological system, but could be harmonious with nature, like the actions of other life forms.

Survival historically necessitated separation of humans from nature:

7. For much of human history, shelter meant total protection from the natural elements and other animals.

8. The separation of humans from nature was necessary for human comfort, both physical and psychological.
9. An anthropogenic geometry clearly distinguished the man-made from the natural and marked the control of humans over the land.

Modernization has amplified the physical and psychological discord between humans and nature:

10. Industrial processes of resource extraction, production, consumption and waste have destroyed biodiversity and polluted the natural resources essential to human life.
11. Industrial products and distribution systems have enabled the geographic disconnect between the origin of products and their place of consumption.
12. Technology has enabled the creation of mechanical, digital, artificial and entirely anthropogenic ecology with a material and geometric manifestation that reinforces the psychological distinction between humans and nature.

The harmonization of humans and nature is the most advanced stage of civilization:

13. The cultural, scientific, and artistic achievements of modern civilization are of value
14. A regression of civilization into a pre-industrial or pre-agrarian state is unnecessary
15. We have the ability to dissolve the physical, psychological, and philosophical barrier between humans and nature that has been necessary for survival since the first human communities.

Thesis:

The built environment has engendered an anthropogenic psychoecology, that is, a psychological separation between humans and nature shaped by the contrasting man-made and natural geometries of our environment. A geomorphological psychoecology – a psychological relationship between humans and nature shaped by a seamlessly integrated landscape-architectural geometry – could engender the recognition that humans are part of nature. By thinking and feeling that humans and nature are one, our understanding of ourselves and of the world will lead us to develop a civilization that exists in harmony with the unified organism of the earth. This new, radically integrated geometry and philosophy of humans and nature is called Gaia tectonics.

Research for Defense:

Semester 1: Pittsburgh, USA

I will begin my research with the material that is most unfamiliar and that I expect to be most difficult, in an effort to eschew my architectural biases and preconceptions about the relationship of landscape, architecture, and psychology. After mid-review, I will enrich my understanding of the architectural-urban context into which my thesis fits. The final deliverable will be a thesis defense paper, and conceptual proposal(s) used to explore the potential architectural manifestations of Gaia tectonics.

Unit I: Earth System Science

Fluvial, Aeolian, and Tectonic Geomorphology: What are the non-anthropogenic processes that shape the surface of the earth? How can these be distilled into typological landscape-architecture elements?

Unit II: Social Sciences

Environmental Psychology: What does psychology reveal about how the environment influences how people think and act? How does the built environment influence humans' perception of ourselves relative to nature in particular?

Evolutionary Aesthetics: What does evolutionary biology say about how our aesthetic sense been influenced by the need to survive? How have the parameters of survival changed, what are the implications for a new aesthetic?

Biophilia: What does psychology and philosophy suggest about the benefits of human-nature interaction?

Mid Review: Thesis Poster, Verbal Presentation and Research Booklet

Unit III: Landscape Architectural History, Theory & Practice

Pre-20th Century History and Theory of Landscape-Architecture Ecology: What attitudes and practices historically shaped humans' relationship to the natural landscape? Why did these approaches arise, and what was their aim?

Landscape Urbanism: How and why are urban designers approaching the integration of landscape and the urban fabric? What were the methods and goals of 20th century Landscape Urbanism (Ville Radieuse/Corb; City Beautiful; Hellerau Garden City...)

20th Century and Contemporary Landscape Architectural Theory and Practice: What are the Modern, Postmodern, Deconstructivist, Parametric, and Sustainable approaches to landscape architecture and integrated landscape-architecture? What do they reveal about humans' evolving perception of ourselves relative to nature? (Precedents: Plasma Studio, Zaha Hadid, Weiss/Manfredi, UNStudio, Diller Scofidio + Renfro, TerraformONE, Watergy Group/Marco Schmidt, Claude Parent & Paul Virilio, Le Corbusier, F. L. Wright, Paul Rudolf, Buckminster Fuller, Paolo Solari...)

Cross-Disciplinary Approaches to Landscape Architecture How are contemporary artists, geographers, and anthropologists exploring the relationship between landscape and humans? What kind of an integrated landscape-architectural language could arise from an interdisciplinary approach?

Final Review: Graphic and Verbal Thesis Defense and Thesis Booklet

Semester 2: Doha, Qatar

One of the greatest challenges of any psychophysiological theory is accounting for cultural differences that, as Edward T. Hall argued, radically change the parameters of a design problem. At the same time that anthropology argues culture influences the use of the body, biology proves that all humans are of a nearly identical genetic make-up with only superficial variations. Any theory of the mind-body must, therefore, contain elements of universal truth. A semester in Doha will give me the opportunity to embrace the challenge of integrating the universal and the specific, seeking to adapt Gaia tectonics to a historical, cultural, economic, and climatic context radically different than that of Pittsburgh. My areas of research need further development, along with a bibliography to support this research. The final project will be conceptual proposal for an integrated landscape-architectural urban intervention of infrastructural scale.

Unit IV: Physical Context

Arid and Coastal Geomorphology: What are the natural processes shaping Qatar's landscape, and how are they different than those processes shaping Pittsburgh?

Rapid Urbanization in Doha: What are the environmental implications of Doha's building and population boom?

Water Management: What are strategies for water conservation and passive cooling through evapotranspirative processes of plants?

Unit V: Social Context

Cross-Cultural Psychology: Examining methods and implications of transferability and culture-specificity in psychology.

Contemporary Architecture and Urbanization: What are current approaches to new architecture in Doha?

Mid Review: Thesis Poster, Verbal Presentation and Research Booklet

Unit VI: Architectural History, Theory, and Precedent

Islamic Architectural History and Theory: What does traditional Islamic architecture reveal about humans' philosophical, spiritual, and practical relationship to nature?

Vernacular Intelligence: What are the bioclimatic strategies and renewable local materials used in traditional architecture in Qatar?

Final Review: Graphic and Verbal Thesis Defense and Thesis Booklet

Alternate Second Semester In Pittsburgh:

Join Dana Cupkova's studio and focus on applying computational design/systems thinking to the development of Gaia tectonics through a landscape-urbanist intervention along the Allegheny River or in Oakland.

Reading Schedule: Bold indicates high-priority readings; Italics indicate lower-priority readings that will only be covered if time permits

7 Weeks to Mid Review...

Unit I: Earth System Science

Week 1: Introduction to Geomorphological Processes (Sept 4 – 11)

Molinar, Peter. "Geomorphology: nature, nurture and landscape." *Nature* Vol 426, 11 December 2003: pp. 612-614 doi:10.1038/426612a
<http://www.nature.com/nature/journal/v426/n6967/full/426612a.html> (Accessed 9 Aug 2013)

Article discussing difference between tectonic forces and hydrological and aeolian forces in shaping the topology of mountainous regions.

Brocklehurst, S.H.. "Tectonics and geomorphology." (2010) *Progress in Physical Geography*, 34 (3) , pp. 357-383. <http://ppg.sagepub.com/content/34/3/357> (Accessed 10 Aug 2013)

Overview of effects of geomorphology on climate change, tools and technology used to make geomorphological predictions, and problems in geomorphology.

Stott, Tim. "Fluvial Geomorphology." *Progress in Physical Geography* Vol 34, No. 2 April 2004: pp. 221-245. <http://search.proquest.com/docview/231093372?accountid=9902>. (Accessed 9 Aug 2013)

Overview of history of fluvial geomorphology and progress in ten major areas of research in the subject.

French, J. R. and H. Burningham. "Coastal Geomorphology." *Progress in Physical Geography* Vol. 35, No. 4 (08, 2011): 535-545.

doi:<http://dx.doi.org/10.1177/0309133311414606>.

<http://search.proquest.com/docview/878132099?accountid=9902>.

Overview of contemporary developments in coastal geomorphology, including studies of anthropogenic vs. natural forcings in erosion.

Bullard, J. E. (2006). "Arid geomorphology." *Progress in Physical Geography*, Vol. 30, No. 4, pp. 542-552.

doi:<http://dx.doi.org/10.1191/0309133306pp497pr> (Accessed 9 Aug 2013 doi)

Survey of papers dealing with arid geomorphology, that is, how the earth's surface is changed by wind (aeolian) forces in arid climates. This article will be most useful if I continue my thesis in Qatar

Baets, S. D., Poesen, J., Knapen, A. and Galindo, P. (2007), "Impact of root architecture on the erosion-reducing potential of roots during concentrated flow." Earth Surfaces, Processes, and Landforms, 32: 1323–1345. doi: 10.1002/esp.1470

Study looking at the effect of root systems and soil type on mitigating erosion during floods; concludes that the effects of root systems (as opposed to above-soil plants) is more significant than previously thought. Could inspire a strategy for integrated landscape-architecture structural mesh reducing erosion during floods...

Tsikalas, Stephen G. and Clayton J. Whitesides. "Worm Geomorphology: Lessons from Darwin." Progress in Physical Geography Vol. 37, No. 2, April 2013: pp 270-281.

<http://search.proquest.com/docview/1323896135?accountid=9902>. Accessed 9 Aug 2013

Discussion of the influence of Darwin's study of worms, the first to examine the role of fauna in effecting geomorphology.

Gares, Paul A., Douglas J. Sherman, Karl F. Nordstrom. "Geomorphology and natural hazards." Geomorphology, Vol. 10, Iss. 1–4, August 1994, pp. 1-18, ISSN 0169-555X, <http://www.sciencedirect.com/science/article/pii/0169555X94900043> (Accessed 10 Aug 2013)

Looking at the field of natural disaster prediction, and parameters developed by geomorphologists that could be applied to social sciences dealing with the same issues.

Week 2: Geomorphological Ecology (Sept 11 – 18)

Tooth, S. (2009), "Invisible geomorphology?" *Earth Surfaces, Processes, and Landforms*, Vol 34: pp. 752–754.

<http://onlinelibrary.wiley.com/doi/10.1002/esp.1724/abstract> (Accessed 08/09/2013)

Describes the field of geomorphology, its relevance to environmental issues, and common misconceptions about the field.

Church, Michael. "The trajectory of geomorphology."

Progress in Physical Geography 2010 34: 265 DOI: 10.1177/0309133310363992

<http://ppg.sagepub.com/content/34/3/265> (Accessed 9 Aug 2013)

Overview of where geomorphology is today and its potential relevance to understanding Earth science systems and addressing sustainability issues.

Dadson, Simon. "Geomorphology and Earth system science."

Progress in Physical Geography June 2010 Vol. 34 No. 3 385-398 doi:
10.1177/0309133310365031

<http://ppg.sagepub.com/content/34/3/385> (Accessed 10 Aug 2013)

Discussion of the relationship between the surface of the earth and all chemical and biological processes, and the need for geomorphology and other natural and social sciences to better collaborate in the development of a comprehensive Earth system science (ESS).

Darby, S. E. (2010), "Reappraising the geomorphology-ecology link." *Earth Surfaces, Processes, and Landforms*, Vol. 35: pp. 368–371. doi: 10.1002/esp.1921
(Accessed 10 Aug 2013)

Looking at relationship between the flow of sediments, erosion, and biodiversity.

Evans, M., Quine, T. and Kuhn, N. (2013), "Geomorphology and terrestrial carbon cycling." *Earth Surfaces, Processes and Landforms*, Vol 38, pp. 103–105.
doi: 10.1002/esp.3337

<http://onlinelibrary.wiley.com/doi/10.1002/esp.3337/abstract> (Accessed 10 Aug 2013)

Discussion of the carbon cycle and how geomorphology can play an important role in understanding it.

Brierley, Gary. "Geomorphology and River Management." *Kemanusiaan: the Asian journal of humanities*. Vol 15, pp. 13-26, 2008.

<http://web.usm.my/kajh/watermarkKEMANUSIAAN%2015/artikel%202.pdf> (accessed 9 Aug 2013)

Article discusses the damage that traditional engineering attitudes have done to the Nature, and how geomorphology offers an alternative approach more likely lead to a harmonious coexistence of humans and the natural environment, specifically looking at river management.

Week 3: Applications of Geomorphological Form-Finding (Sept 18-25)

Additional readings on geomorphological form-finding processes and relevant computational approaches to be determined after discussion with Dana Cupkova.

Unit II: Social Sciences

Week 4, 5: Environmental Psychology and Philosophy (Sept. 25 – Oct. 9)

Eberhard, John P. Brain Landscape: The Coexistence of Neuroscience and Architecture. Oxford ; New York: Oxford University Press, 2009.

Discussion of the relationship between architecture and cognitive neuroscience, with chapters focused on education environments, the workplace, elderly housing, and sacred places.

Seamon, David, Ed. Dwelling, Seeing, and Designing: Toward a Phenomenological Ecology. Albany: State University of New York Press, 1993.

Collection of essays looking at sustainable practices from a phenomenological perspective.

Birksted, Jan, Ed. Landscapes of Memory and Experience. London ; New York: Spon Press, 2000.

Collection of essays exploring landscape from the perspective of art, literature, and architecture.

Thwaites, Kevin., and Ian Simkins. Experiential Landscape: An Approach to People, Place and Space. London ; New York: Routledge, 2007.

Precisely what I am interested in!

Additional readings to be determined based on suggestions of Charles Kemp, my Cognitive Psychology professor, covering works by William White, Robert Summer, and Christopher Alexander.

Week 6: Biophilia and Evolutionary Aesthetics (Oct 9 – 16)

Kahn, Peter H. Technological Nature: Adaptation and the Future of Human Life. Cambridge, Mass.: MIT Press, 2011.

A series of experiments and a critical analysis of the difference between direct experience of nature and nature mediated through digital technology, claiming that “technological nature is better than no nature, but still not as good as nature itself.” Why direct interaction with physical nature is still important!

Kahn, Peter H., and Stephen R Kellert. Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations. Cambridge, Mass.: MIT Press, 2002.

Essays on the benefits of interacting with nature for children and adolescents.

Kellert, Stephen R., and Edward Osborne Wilson. The Biophilia Hypothesis. Washington, D.C.: Island Press, 1993.

Essays on the relationship of nature to spirituality, ethics, psychology, and culture.

Kellert, Stephen R., Judith Heerwagen, and Martin Mador. Biophilic Design: The Theory, Science, and Practice of Bringing Buildings to Life. Hoboken, N.J.: Wiley, 2008.

A comprehensive collection of essays on the history, theory and practice of biophilic design.

Smith, Gregory A., and Dilafruz R. Williams. Ecological Education in Action: On Weaving Education, Culture, and the Environment. Albany, NY: State University of New York Press, 1999.

Essays on educational practices that engage nature and ecology; useful for the educational component of my thesis.

Thiel, Philip. People, Paths, and Purposes: Notations for a Participatory Envirotecture. Seattle: University of Washington Press, 1997.

Presentation of research into the relationship between people, landscape, and urban environments with an eye towards sustainable interaction.

Readings on evolutionary aesthetics to be determined, based on suggestions by Charles Kemp.

Week 7: Synthesis (Oct 16-23)

Preparation of thesis poster summarizing my Thesis and key research findings for defense, along with graphic and verbal presentation of written, visual (and physical?) research artefacts for Mid Review.

Mid Semester Break (Oct 18-20)

Mid Review: Oct 23

Unit III: Landscape Architectural History, Theory & Practice

Week 8: Vernacular Architecture (Oct 23 – 30)

Birksted, Jan. Relating Architecture to Landscape. London ; New York: E & FN Spon, 1999.

Examples of strategies in relating architecture and landscape in cultures across the world.

Jellicoe, Geoffrey, and Susan Jellicoe. The Landscape of Man: Shaping the Environment From Prehistory to the Present Day. 3rd ed., expanded and updated. New York, N.Y.: Thames and Hudson, 1995.

Investigation of the ways in which humans have manipulated the landscape across history to “express concepts of power, comfort, mystery, etc.”

Conan, Michel. Sacred Gardens and Landscapes: Ritual and Agency. Washington, D.C. : Cambridge, MA: Published by Dumbarton Oaks Research Library and Collection, 2007. Ceremonial movement across religious landscapes.

Lou, Qingxi. Chinese Gardens. Updated ed. Cambridge, UK ; New York: Cambridge University Press, 2011.

History and theory of Chinese garden design.

Porter, Yves, and Arthur Thévenart. Palaces and Gardens of Persia. Paris: Flammarion, 2003.

A good resource for images of garden and palace architecture in Iran.

Ruggles, D. Fairchild. Islamic Gardens and Landscapes. Philadelphia: University of Pennsylvania Press, 2008.

Resource on Islamic gardens and architecture.

Week 9: The Picturesque and The Sublime (Oct 30 - Nov 6)

Gilpin, William. "Observations, relative chiefly to picturesque beauty, made in the year 1776, on several parts of Great Britain; particularly the High-Lands of Scotland." *History and Geography* London, Vol. Volume 1 of 2 1789. 253pp.

What appears to be a classic text of the Picturesque.

Hunt, John Dixon. Gardens and the Picturesque: Studies in the History of Landscape Architecture. Cambridge, Mass.: MIT Press, 1992.

Nine essays covering the history of the Picturesque in France and England, influences of Ruskin's architectural theory and J.M.W. Turner's paintings, and the relevance of the Picturesque to Modern and contemporary landscape architecture. Focus on the Picturesque as the assertion of human will to control the forces of nature for our own pleasure.

Price, Uvedale. "An Essay on the Picturesque, as Compared with the Sublime and the Beautiful; and, on the use of Studying Pictures, for the Purpose of Improving Real Landscape." London: Printed for J. Robson, 1794. Accessed 21 Aug 2013

<http://www.archive.org/details/essaysonpictures01priciala>

Classic text on Picturesque landscape.

Middleton, Robin. "Soane's Spaces and the Matter of Fragmentation," ed. Margaret Richardson and Mary Anne Stevens. *John Soane, Architect: Master of Space and Light*. London: Royal Academy of Arts, 1999. pp. 26-37.

Potential resource on Soane's spaces and the Picturesque.

Vidler, Anthony. "Notes on the Sublime: From Neoclassicism to Postmodernism," ed. Taisto H. Mäkelä. Canon. New York, N.Y.: Princeton Architectural Press, 1988. pp. 165-91

Essay on the Sublime.

Week 10: Landscape Architecture Theory and Criticism (Nov 6 – Nov 13)

Swaffield, Simon R, Ed.. Theory in Landscape Architecture: A Reader. Philadelphia: University of Pennsylvania Press, 2002.

Comprehensive anthology of historic and contemporary landscape architecture theory.

Thompson, Ian H. Rethinking Landscape: A Critical Reader. London ; New York: Routledge, 2009.

Collection of essays to provoke thought on definitions of landscape...

Spellman, Catherine, Ed. Re-envisioning Landscape/architecture. Barcelona: Actar, 2003.

Collection of essays on spatial cognition, urbanism, behavior, contemporary and future landscapes.

Prigann, Herman, Heike Strelow, and Vera David. Ecological Aesthetics: Art in Environmental Design : Theory and Practice. Basel ; Boston: Birkhäuser, 2004.

Essays on environmental ethics in art and landscape design.

Attali, Erieta, and Alessio Assonitis. In Extremis: Landscape Into Architecture. New York, NY: Graduate School of Architecture, Planning, and Preservation, Columbia University, 2010.

Collection of architectural theory essays on architecture and landscape, including Frampton and Pallasmaa.

Gillette, Jane Brown., and Marc Treib. Meaning in Landscape Architecture & Gardens: Four Essays, Four Commentaries. London ; New York: Routledge, 2011.

Critical essays on how meaning is conveyed in landscapes and gardens, and whether meaning should be conveyed.

Smout, Mark., Laura Allen, and Allen Smout. Augmented Landscapes. New York: Princeton Architectural Press, 2007.

Intriguing critique of landscape architecture and urbanism.

Week 11: Cross-Disciplinary Approaches to Landscape Architecture (Nov 13-20)

Rugg, Judith., and Craig Martin. Spatialities: The Geographies of Art and Architecture. Bristol ; Chicago: Intellect, 2012.

A broad range of discussion on interstitial space, liminal space, spatial networks, geography, sense of place, from the perspective of artists, theorists, and designers.

Bell, Simon, Ingrid Sarlov Herlin, and Richard Stiles. Exploring the Boundaries of Landscape Architecture. New York, NY: Routledge, 2012.

Fascinating collection of cross-disciplinary perspectives on landscape architecture, including anthropology, economics, architecture, urbanism, and ecology.

Dixon, Deborah P., Harriet Hawkins, and Elizabeth R. Straughan. "Wonder-Full Geomorphology: Sublime Aesthetics and the Place of Art." *Progress in Physical Geography* Vol. 37, No. 2 (04, 2013): 227-247.

doi:<http://dx.doi.org/10.1177/0309133312457108>. (Accessed 10 Aug 2013)

<http://search.proquest.com/docview/1323909919?accountid=9902>.

Looking at collaborations between geomorphologists's quantative reading of landscape and artists phenomenal investigations of place.

Halprin, Lawrence., et al. Where the Revolution Began: Lawrence and Anna Halprin and the Reinvention of Public Space. Washington, DC: Spacemaker Press, 2009.

Examination of the work and design approaches of landscape architect Lawrence Halprin, including his collaborations with his wife, the famed choreographer Anna Halprin. Relating landscape architecture and Anna Halprin's work, which deals with kinaesthesia, the body in space, relating to others, and using movement as a tool for physical healing and conflict resolution, could be extremely interesting.

Toy, Maggie, Ed. Architecture & Anthropology. London : New York: Academy Editions, 1996.

A collection of essays looking at architecture from the perspective of users and society.

Benson, John F., and Maggie H Roe. Landscape and Sustainability. 2nd ed. London ; New York: Routledge, 2007.

A collection of essays on sustainable landscape practices from the standpoint of public policy.

Week 12: Landscape Urbanism (Nov 20 – 27)

Adam, Hubertus, Landscape Architecture in Mutation: Essays On Urban Landscapes. Zürich: gta Verlag, 2005.

Collection of essays focusing on landscape architecture in the urban context.

Olmsted, Frederick Law, and Robert C Twombly. Frederick Law Olmsted: Essential Texts. New York: W.W. Norton, 2010.

Collection of essays by the seminal landscape architect.

Steenbergen, Clemens M., and Wouter Reh. Architecture and Landscape: The Design Experiment of the Great European Gardens and Landscapes. Rev. and expanded ed. Basel ; Boston: Birkhäuser, 2003.

Historical overview of landscape architecture and planning in Europe.

Adam, Hubertus, Eidgenössische Technische Hochschule Zürich, and Eidgenössische Technische Hochschule Zürich. Institut für Landschaftsarchitektur. Landscape Architecture in Mutation: Essays On Urban Landscapes. Zürich: gta Verlag, 2005.

Collection of essays focusing on landscape architecture in the urban context.

Precedents may include Ville Radieuse/Corb; City Beautiful; Hellerau Garden City.

Additional resources to be determined in discussion with Rami.

Thanksgiving Break: Wednesday Nov 27 – Sunday Dec 1)

Week 13: Integrated Landscape-Architecture (Nov 27 – Nov Dec 4)

Allen, Stan., Marc McQuade. Landform Building: Architecture's New Terrain. Baden, Switzerland : [Princeton, N.J.]: Lars Müller Publishers, 2011.

A perfect resource for my thesis, featuring work of contemporary architects designing architecture as landform.

Brayer, Marie-Ange, Béatrice Simonot, and Serge Grouard. ArchiLab's Earth Buildings: Radical Experiments in Land Architecture. New York, N.Y.: Thames & Hudson, 2003.

Collection of essays on forces, geography, choreography, the body, and the integration of landscape and architecture.

Balmori, Diana., and Joel Sanders. Groundwork: Between Landscape and Architecture. New York: Monacelli Press, 2011.

Examples of integrated landscape and architecture.

Precedents: Plasma Studio, Zaha Hadid, Weiss/Manfredi, UNStudio, Diller Scofidio + Renfro, TerraformONE, Watergy Group/Marco Schmidt, Claude Parent & Paul Virilio, Le Corbusier, F. L. Wright, Paul Rudolf, Buckminster Fuller, Paolo Solari

Final Review: Sunday, Dec 8

Week 15: Thesis Book Preparation (Dec 4 – 13)

Thesis Book Submission (Fri, Dec 13)

Contemporary Practice of Landscape Architecture – Whenever I get a chance...

Losantos, Agata., Daniela Santos Quartino, Bridget Vranckx, and Martin Douch. Urban Landscape: New Tendencies, New Resources, New Solutions. Barcelona, Spain: Loft Publications, 2007.

Potentially useful look at recent theoretical and practical approaches in landscape and urbanism, topological/blob architecture...

Deming, M. Elen, and Simon R Swaffield. Landscape Architecture Research: Inquiry, Strategy, Design. Hoboken, N.J.: Wiley, 2011.

Potentially useful look at contemporary research in landscape architecture.

Kirkwood, Niall. Manufactured Sites: Rethinking the Post-industrial Landscape. London ; New York: Spon Press, 2001.

Essays and case studies extremely relevant to the Pittsburgh context.

Vidiella, Alex Sanchez, Montse Borràs, Esther Moreno, and Mar Armengol. The Sourcebook of Contemporary Landscape Design. New York : Enfield: Collins Design, 2008. Comprehensive collection of worldwide case studies in landscape architecture and urban planning. Images, drawings, and inspiration.

Corner, James. Recovering Landscape: Essays in Contemporary Landscape Architecture. New York: Princeton Architectural Press, 1999.

Collection of potentially inspiring essays on landscape architecture

Amoroso, Nadia., and George Hargreaves, Ed. Digital Landscape Architecture Now. London ; New York: Thames & Hudson, 2012.

Resource for contemporary landscape architecture firms and projects leveraging digital design tools to develop organic form.

Reference Materials:

Representational Techniques

Mertens, Elke. Visualizing Landscape Architecture: Functions, Concepts, Strategies. Basel ; Boston: Birkhäuser, 2010.

This DVD discusses the importance of image in conveying landscape architecture and the wide variety of digital and analog methods available.

Steenbergen, Clemens M.. Composing Landscapes: Analysis, Typology and Experiments for Design. English ed. Basel ; Boston: Birkhäuser, 2008.

Potentially useful reference for design and representational techniques.

Treib, Marc. Representing Landscape Architecture. London ; New York: Taylor & Francis, 2008.

This examination of various historic and contemporary representational methods in the design and presentation of landscape architecture will be useful for me as I explore hybrid analog-digital representation.

Landscape Materials and Construction

Margolis, Liat., and Alexander Robinson. Living Systems: Innovative Materials and Technologies for Landscape Architecture. Basel : London: Birkhäuser, 2007.

Resource for innovative materials.

Melby, Pete, and Thomas Cathcart. Regenerative Design Techniques: Practical Applications in Landscape Design. New York: Wiley, 2002.

Useful resource for regenerative landscape techniques.

Bioclimatic Design

Brown, Robert D. Design With Microclimate: The Secret to Comfortable Outdoor Spaces. Washington: Island Press, 2010.

Reference for bioclimatic design strategies, with a focus on outdoor spaces. Relevant to design of pavilions in my project.

Green Roofs/Walls

Uffelen, Chris van. Façade Greenery: Contemporary Landscaping. [Germany]: Braun Publishing AG, 2011.

Lots of examples of integrated landscape and architecture.

Weiler, Susan K., and Katrin Scholz-Barth. Green Roof Systems: A Guide to the Planning, Design, and Construction of Landscapes Over Structure. Hoboken, N.J.: John Wiley & Sons, 2009.

Explains purpose and benefits of green roofs; methods of design and construction.

Lambertini, Anna., Mario Ciampi, and Jacques Leenhardt. Vertical Gardens. London: Verba Volant, 2007.

Reference for techniques and inspiration in green walls.

Site Engineering and Sustainability

Marsh, William M. Landscape Planning: Environmental Applications. 4th ed. Hoboken, NJ: Wiley, 2005.

Comprehensive guide to water management, waste management, soils, plants, climate management, and sustainable practices in landscaping.

Petschek, Peter. Grading for Landscape Architects and Architects. Basel ; Boston: Birkhäuser, 2008.

Steiner, Frederick R. The Living Landscape: An Ecological Approach to Landscape Planning. 2nd ed. New York: McGraw Hill, 2000.

Useful reference for sustainable approaches in landscape design.

Semester 2: Preliminary Reading List

Urban Infrastructure and the Experience of Movement

Conan, Michel, Ed. Landscape Design and the Experience of Motion. Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2003.

Collection of essays on movement through historic and contemporary landscapes.

Shannon, Kelly., and Marcel Smets. The Landscape of Contemporary Infrastructure. Rotterdam: NAI Publishers, 2010.

Looking at the experience of the landscape through transportation and the physical imprint of transport infrastructure on the landscape.

Stoll, Katrina., Scott Lloyd, and Stan Allen, Eds. Infrastructure As Architecture: Designing Composite Networks. Berlin: Jovis, 2010.

Collection of essays looking at infrastructure as architecture.

Zinsmeister, Annett, Ed. *Gestalt Der Bewegung*. Berlin: Jovis Verlag, 2011.

Essays (in German and English) looking at movement as an urban and cultural force.

Space Syntax

Karimi, Kayvan. "A Configurational Approach to Analytical Urban Design: 'Space Syntax' Methodology." *Urban Design International* Vol 17, No. 4 (Winter, 2012): pp. 297-318. doi:<http://dx.doi.org/10.1057/udi.2012.19>.

<http://search.proquest.com/docview/1139630942?accountid=9902>. (Accessed 9 Aug 2013).

Discussion of space syntax principles in urban design.

Ratti C, 2004, "Space syntax: some inconsistencies" *Environment and Planning B: Planning and Design* Vol. 31, Iss 4: pp. 487 – 499.

<http://www.envplan.com/abstract.cgi?id=b3019> (Accessed 9 Aug 2013)

Analysis of some of the faults with space syntax in predicting human movement in urban environments, and suggestions for how it could be improved.

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Indoor /Outdoor Space

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Fox, Michael, and Miles Kemp. Interactive Architecture. New York: Princeton Architectural Press, 2009.

Very interesting book looking at the work of Fox Lin an OdescO that uses computation, robotics, and digital interfaces to explore kinetic architecture.