

QuantumCITY: The Bali Studio

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Image source: Ng, Shawn Xinwei (2023)

1. PREAMBLE

Our foundational understanding of reality – of what matter is – is totally changed by the quantum paradigm. The ideas of Newton, Darwin, Freud, Marx, Sarte, Foucault - the basic sources of today's world view have been overtaken by new discoveries. In the worldview of the emerging quantum paradigm, the universe is not a lifeless, soulless aggregate of inert chunks of matter, it is instead a living organism. Life is not a random accident, and the basis of the human psyche is more than about survival and self-gratification. We are all a part and simultaneously a whole in our inter-connected universe. How does this new paradigm affect our well-being, our city and architecture?

The studio is interested in exploring consciousness, the quantum paradigm and the dance of relationships and materials that affect our overall perception and being in architecture. We will start by immersing ourselves in Chinatown, discovering the inter-play of our inner worlds and outer worlds that make up the spirit of the place. Studio members are free to explore multiple contexts and inter-subjective enquiries, experimenting with a variety of techniques to present and represent their own subjective and objective response to the city viewed through a broad understanding of the Quantum paradigm. The specific focus will be the interactivity of the observer and the observed universe.

2. DESIGN RESEARCH PROJECT

Students will conduct a warm data (Bateson) urban experiment from the perspective of Ken Wilber's AQAL framework. They will investigate the following:-

- 1) their own inner subjective response to the site and what affects how they individually perceive the site
- 2) the subjective Genius Loci or spirit of the place
- 3) an objective – the tangible and observable aspects of the individual and how it is expressed on the
- 4) the objective and tangible aspects of the space and place

Students will translate their research and responses into drawings and models which will be supplemented by their other forms of research. They are free to choose any contexts that interest them or that emerges from their interaction with the site and its people. They will be asked to explore and understand their own feelings and thoughts and the interrelationship between the Physiosphere, the biosphere, the noosphere and theosphere (Wilber).

From the initial responses, students will speculate on a fictional city and create an architectural narrative that explores the field of inquiry and expresses the ideas and concepts derived from the abstract models, drawings and explorations.

3. RESEARCH METHOD AND PROGRAMME DETAILS

The studio will explore various ways where subjective responses and objective responses are expressed as drawings and models. They will study and investigate the relationships between the various context and their own subjective-objective responses and to develop a hypotheses that they will investigate and develop.

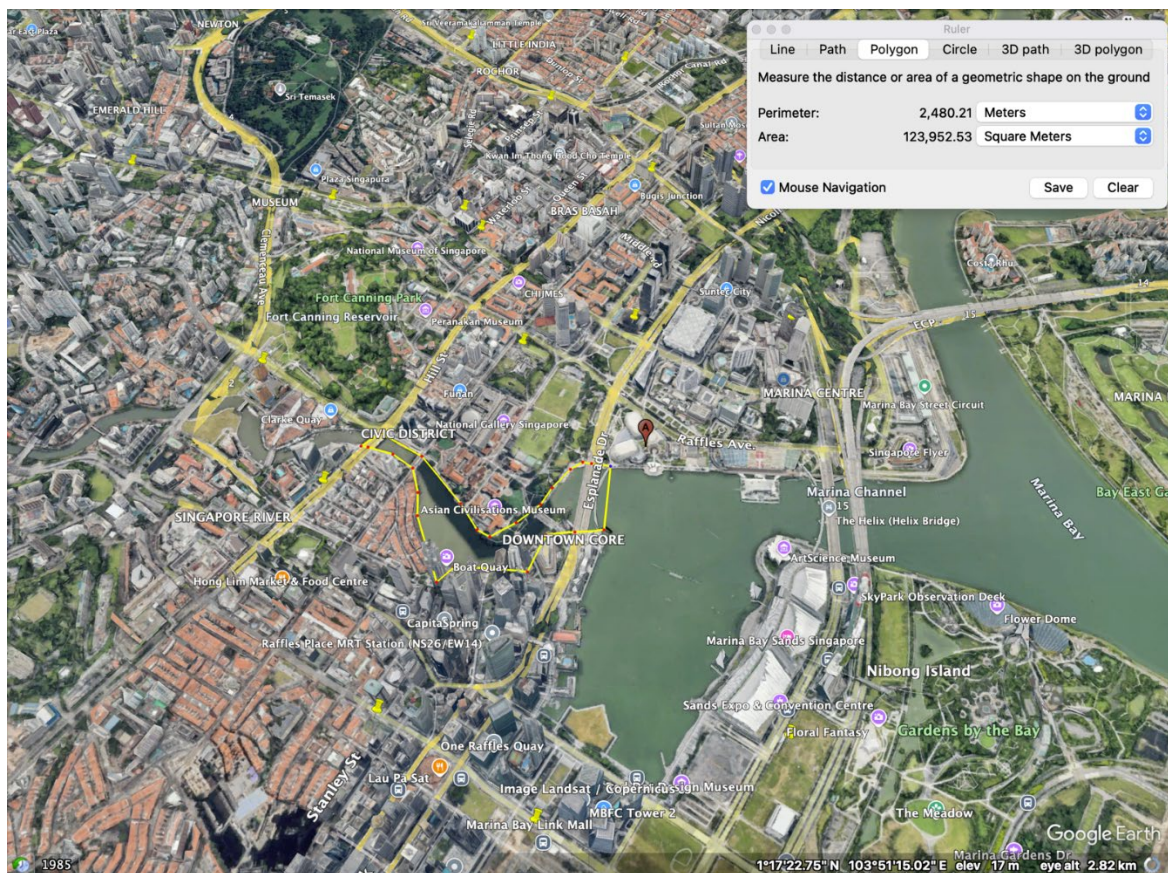
Proposed Programme

Week 1 & 2	Discover – Students work together to make a comparative study of Bali and Singapore from the framework of the Doughnut Economy. Students conduct subjective exploration of their inner responses and unconscious expressions. Research and Analysis via drawings, mapping and modeling subjective – objective responses. Cartographic mapping and analysis of site and its surroundings and interpretive drawings and models.	Drawings of site, data and areas of inquiry Objective and subjective drawings Conceptual model of 3D or 4D relationship of data A3 maps and A1 site drawings Vision statement of field of enquiry
Week 3 & 4	Define – Asking how can we.. and what if... questions. Mapping insights from week 1 & 2 onto programmes and creating experimental models and diagrams with spatial temporal quantities.	Conceptual and interpretive analogue and digital drawings, collages, models and analytics. Programme and design experiments. Mapping of programmes into spatial requirements. Overall strategic concept masterplan and identification of specific site
Week 5 & 6	Develop – Translating analogue models into digital models and diagrams. Developing	Digital models and parametric models. Development of plans, sections and

	plans, sections and story boards	axonometric drawings. Experimental drawings
Week 7 & 8	Rendering drawings, Create enscape file and fly through	Composing storyboards and renderings of composite drawings Review of preliminary enscape models and proposed fly paths
Week 9 & 10	Prepare large drawings, preparing 3D printing files	Prepare 1:500 scale plans, 1:100 scale combined axonometric model, 1:50 axonometric drawing, 1:100 scape sections, one point perspectives and axonometrics
Week 11 & 12	Preparing movie clip, 3D model, book and printing drawings	Compiling entire body of work into a short 3D movie clip, fly through and book. Recording a video presentation.

4. RESEARCH SITE

1. A comparative study of Bali and Singapore and its macro context using cartographical techniques
2. Singapore River and interface between land and water



The site is about 12 Ha and a perimeter of approximately 2500m. Students will be asked to propose how the site can be broken up into 7 parts. Each person can choose a part. The site sub-division shall ensure that every student has an edge condition of the site to along the boundaries. Each person gets roughly a 350

length along the site which is a ten minute walking distance. Students are to study the parts and wholeness from the perspective of understanding the holarchy and how each holon is nested in the next. Students are to negotiate amongst themselves to suit their area of inquiry. Each student has about 10Ha of study and it has to include the water edge. Students on their own is a basic holon (a 10Ha precinct).

3. A field trip to Bali

Students will be required to then combine the entire study into a group studio response comprising: -

- a) the macro transcontextual study of Bali and Singapore
- b) Singapore River Study
- c) Bali Field Trip report

5. COMMUNITY OF PRACTICE, READINGS AND RESOURCES

1. Kate Raworth, "*Doughnut Economics: seven ways to think like a 21st century economist*"
2. Christopher Alexander, "*A Pattern Language: Towns, Buildings, Construction*"
3. Nikos A. Salngaros, "*Principles of Urban Structure*"
4. Amerigo Marras, "*ECO-TEC: Architecture of the In-Between*"
5. Paraq Khanna, "*Connectography: Mapping the Future of Global Civilization*"
6. Mitchell Waldrop, "*Complexity: The Emerging Science at the Edge of Order and Chaos*"
7. Jeffrey D. Sachs, "*The Age of Sustainable Development*"
8. Nora Bateson, "*Small Arcs of Larger Circles: Framing Through Other Patterns*"
9. Piero Mella, "*The Holonic Revolution*"
10. Douglas R Hofstadter, "*Godel, Escher, Bach: An Eternal Golden Braid*"
11. Charles Montgomery, "*Happy City*"
12. John Cage & Merce Cunningham, "*Chance Conversations: An interview with Merce Cunningham and John Cage*" <https://youtu.be/ZNGpjXZovgk>
13. Laurie Anderson, "*O Superman*" <https://youtu.be/Vkfpi2H8tOE>, "*Born, Never asked*" https://youtu.be/A0ltGjJ7_U8
14. Francis Ford Coppola & Phillip Glass, "*Qatsi* trilogy trailer" <https://youtu.be/FHMmP5Ayous>, "*Koyaanisqatsi*" <https://youtu.be/1jM2WA2WbDc>, "*Powaqqatsi*" <https://youtu.be/BQQAjbXFO5s>,
15. Sol Lewitt, "*Sol Lewitt: The Well tempered Grid*" <https://youtu.be/v-7mM9dK6IU>
16. Michael Murphy, "*Architecture that's built to heal*" TED Talk
17. Mark Anielski, "*The Economics of Well Being*"
18. Ken Wilber, "*A Brief History of Everything*"
19. Don Edward Beck and Christopher C. Cowan, "*Spiral Dynamics*"
20. Italo Calvino, "*Invisible Cities*"
21. Bernard Tschumi, "*The Manhattan Transcripts*"
22. Jenny Roe and Layla McCay, "*Restorative Cities: urban design for mental health and wellbeing*"
23. Gary Zukav, "*The Dancing Wu Li Masters*"
24. Fritjof Capra, "*The Tao of Physics*"
25. Jeffrey Kluger, "*Simplexity: Why Simple Things Become Complex (and How Complex Things Can Be Made Simple)*"
26. CJ Lim and Ed Liu, "*Short Stories: London in Two-and-a Half Dimensions*"
27. Geoffrey West, "*Scale: The Universal Laws of Life and Death in Organisms, Cities and Companies*"

6. DESIGN STUDIO SPECIFIC EXPECTATIONS

- i. To understand integral theory and be comfortable with a state of not knowing.
- ii. To understand the entire creative process as simultaneous design and research.
- iii. To be able to conduct research, to observe and identify the various context affecting any issue or any project.
- iv. To be able to translate subjective and objective data into experimental models and representations.
- v. To be able to frame fields of enquiry with coherence and clarity.

- vi. To be able to formulate appropriate design questions.
- vii. To be able to formulate a design brief and abstract experimental responses with appropriate drawings and models.
- viii. To be able to translate abstract models and drawings into architecture.
- ix. To learn and use new digital tools for fabrication and 3D printing.
- x. To create advance abstract representations.
- xi. To learn and create an Enscape rendering environment from SketchUp, Grasshopper and Rhino.
- xii. To be able to compose a presentation storyboard.
- xiii. To be able to understand how to organize and design with holons and in a holoarchy.
- xiv. To be able to present complex ideas with clarity and confidence.
- xv. To be able to gain an insight into how architecture affects complex systems and multiple contexts.

7. PRESENTATION AND DELIVERABLES

Deliverables at Interim Reviews to be determined by each Studio Tutor.

At the Final Review, each project shall be described **at minimum** by this baseline set of deliverables:

- 1) Orthographic architectural drawings (site plan, plans, sections, elevations)
- 2) Three-dimensional orthographic drawing (i.e. a 1:100 /1:50 sectional oblique) demonstrating the design research intent and its comprehensive embodiment in the design
- 3) Composite Drawing
- 4) Physical Models – abstract experiments, study models and final model
- 5) Descriptive, analytical, or illustrative images chosen to best describe the design research idea
- 6) Process drawings to show relevant aspects of the design process, method, and research approach
- 7) Enscape rendered model
- 8) Fly through and mini movie
- 9) Individual Design Journal documenting entire research programme over the semester on Miro and as appropriate in hard copy
- 10) 7-minute verbal performative presentation at Final review.
- 11) A PowerPoint presentation and E-book compilation.

The student's design of the overall layout, drawing types, drawing styles, models, digital vs analog, stills vs moving images, graphics, fonts etc. are all part of the design module's assignment.

Together with the verbal description of the project, the visuals argue for each student's architectural research, process, and final proposed design research outcomes.

Other Deliverables

Combined Studio Report (A4 portrait): digital copy and hard copy for department record. A \$50 reimbursable expense per studio is granted to each studio.