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Lecture 8

A. Emergent systems.
B. Examples from artificial life.
C. Inhuman experiments.
D. Architectural education.
Preamble

• Notice that current architectural education and practice are opposite to the method presented in my lectures
• But established system is not integral with natural and biological systems
• If we want sustainability, my lectures provide the most helpful direction
A. Emergent systems

• I now apply systems theory to explain some phenomena of human society

• Systems develop new characteristics not present in the initial inputs — an instance of emergence

• A system of beliefs grows over time, and eventually takes over a society

• Social contagion spreads a new norm
Power as an emergent phenomenon

- Ideology and questionable beliefs lead to the emergence of a power structure
- System grows in strength and detaches itself from the rest of the world
- Becomes more and more insular
- Periodic “reform” perpetuates power structure — a staged deception
George Orwell’s novel “1984”

- The past is erased — people are forced to live in the present
- Power is expressed by inflicting pain
- *Reality is defined only by the system*
- *There is no other truth to turn towards*
- *Totalitarian system re-writes history*
A “new” tradition emerges

- Movement based on ideas turns into an institutional power base
- Irrational ideas are transformed into established (rational!) practice
- Henceforth, the system’s goal is simply to perpetuate the existing power structure by any available means
Educational system ignores biophilia and adaptivity

- System of architectural education concentrates upon abstract forms
- Style-based design is detached from biological needs and from nature
- Design is detached from spiritual needs
- There is no integrity with humanity
Main goals for architectural education

• Should be to raise people’s awareness of the effects of the built environment
• To take responsibility for one’s designs
• To focus on wellbeing of inhabitants
• Not only to come up with novel shapes
• Not to become mindless pawns of a manipulative power system
B. Artificial life

• *Innocent aspect*: pixels on a computer screen move around and gobble each other up — only a game

• *Alarming aspect*: the two-way transformation between living beings and machines — extremely serious

• This latter process has re-shaped humanity in the 20th Century
Relationship between machines and living beings

• Two possible ways to go:
  • 1. UP — make machines mimic capabilities of living beings
  • 2. DOWN — reduce living beings to the characteristics of machines

• Going DOWN determines the form of the 20th Century’s built environment
From living being to machine
Going UP — enhance machines

- Computers enhance our capabilities
- Great successes in robotics: Rodney Brooks’ Mars Explorer
- Industrial robots can work in delicate, dangerous, or repetitive conditions
- Military robots save lives — more expendable than humans
Going UP (cont.)

• Add more and more intelligent qualities to machines, so that they are able to mimic human capabilities
• Increase their perceptive mechanisms
• Increase their capacity to process information
• Increase autonomous action capability
Going DOWN — reduce beings

- Advertising brainwashes people (Le Corbusier was an advertising pioneer!)
- Manipulate people as inert entities
- Transforms human beings into mechanical consumers of industrial products
- Brainwash humans to act as suicide bombers — expendable beings
Going DOWN (cont.)

• Remove more and more intelligent qualities from humans, until they begin to act like machines

• *Decrease* perceptive mechanisms

• *Decrease* capacity for processing information

• *Decrease* autonomous action capability
Industrialization of animals

• Beings become an industrial product
• Battery-raised chickens pass all their lives crammed together in atrocious conditions
• Bred with growth hormones and genetically modified — made into unnatural monsters
• Laboratory animals used in cruel and inhumane experiments
Industrialization of people

- Mass production driven by speed, volume, efficiency, cost, bottom line
- Uses workers as machines, or as simple cogs in a production machine
- *Reduces the complex humanity of people to a single mechanistic function*
Contemporary trends

• French-Canadian philosopher and author Ollivier Dyens explores the merging of humans with machines
• Major trend underlying all our culture
• More DOWN than UP
“Metal and Flesh”
Artificial life

- Was achieved in the 20th Century
- — opposite of what was expected!
- — not the elevation of machines to the level of humans, or even animals
- Instead, the reduction of animals and human beings to the level of machines
Social engineering

- Creates monsters from living beings
- Manipulates their genetic information to create unnatural new forms of life
- Seeks to fundamentally re-shape life forms so that they benefit industrial production and consumption
- Aims to fit life into a machine world
Three levels of being human

• 3. The transcendent human being
• 2. The biological human being
• 1. The abstract (mechanical) human being

Most complete, most fulfilling existence moves through all three levels

• Contemporary architecture and urbanism act strictly on level 1 — misnamed “rationality”
“Biophilic Design”

• N.S. & Kenneth Masden: “Neuroscience, the Natural Environment, and Building Design”

“Biophilic Design”
Biophilic architecture respects human levels 2 and 3

- An architecture that focuses on human feelings and psychology
- Architecture concerned primarily with human biology and sensitivities
- Design that never imposes any formal ideas without testing their effects
- Design that rejects social engineering
Architects and industrialization

- Architects accept the “machine aesthetic” and its unnatural forms
- Architects are among the most enthusiastic supporters of technological solutions to the built environment
- But they don’t notice when certain applications of technology reduce human beings to machines
Utopia becomes dystopia

- Hopeful dream of utopia transformed into the nightmare of dystopian despair
- Already recognized by science-fiction authors, but not yet by philosophers
- Culture of architectural despair in the high-rise slums of the French cités and dystopian urban regions the world over
C. Inhuman experiments

• When human beings are degraded to machines, atrocious actions become possible, and even feasible
• Dominant idea of “progress” gets confused with inhuman pursuits
• But this is not true science, because it does not follow the scientific method
Human experiments today

- Carefully regulated by government
- First tried out on laboratory animals
- Only after effects are well understood to be safe, then tried on volunteer human subjects, not forced on people
- If there are any obvious negative signs, the experiment is discontinued
Control group is additional check

• Experiments on humans are always carried out with a control group
• Continuously compare state of subjects with those in the control group
• If any negative *statistical* effect is found as compared to the control group, experiment is terminated
Inhuman experiments

- Those that ignore established checks
- Masquerade as “scientific enquiry”
- Unconcerned with fate of the subjects
- Experimenter declares noble intention: “to solve the problems of humanity”
- Most often, experiments are carried out with detachment and indifference
Double standard for human experiments

• The medical industry is held to strict standards for human experimentation
• But architects and urbanists experiment freely on millions of humans without any controls or supervision
• Even with massive evidence, toxic typologies continue to be marketed
Le Corbusier

• Pseudonym of Charles-Édouard Jeanneret-Gris
• Designed inhuman environments for millions of persons without ever considering their effects on occupants
• Very creative in proposing far-ranging ideas for building and city form
Absolute self-assurance

- Le Corbusier was convinced of the absolute truth and moral value of his own inspiration
- Never questioned the correctness of his schemes, but treated them as revealed wisdom (*religious presumption*)
- Le Corbusier’s ideas were never tested
- But they are applied repeatedly!
Le Corbusier’s points

• 1. Architecture of the horizontal (lecture 2)
• 2. Anti-gravity anxiety (lecture 2)
• 3. Overhanging slabs (lecture 2)
• 4. Flat or tilted plane ceilings and roofs
• 5. Randomization of tectonic forms
• 6. Rough exterior materials for indoor surfaces — brutalist concrete
Le Corbusier’s points (cont.)

- 7. Forbid ornament (taken from A. Loos)
- 8. Banish complex and natural colors
- 9. Force people into high-rise buildings
- 10. Disconnect families from nature
- 11. Disconnect children from the earth
- 12. Destroy urban space by gigantism
- 13. Erase the human scale of streets
Inhuman architecture

- Le Corbusier invented a vocabulary of forms, all of which provoke anxiety
- Used as standard design typologies
- Their brilliant effectiveness and consistency cannot be accidental
- Le Corbusier defined a “rational” world based upon psychological anxiety
Hospitals and apartment blocks

- Le Corbusier planned a hospital for Venice with no windows
- From biophilia, we know that healing environments absolutely require sunlight and views of nature
- *Unité d’Habitation* in France — extra-thin walls create terrible noise problem
Religious architect?

- Commissioned by Father Marie-Alain Couturier, who regarded Le Corbusier as “the greatest living architect”
- 1. Convent of Sainte-Marie de la Tourette, France, 1953 (actually by Iannis Xenakis)
- 2. Chapel of Notre-Dame du Haut, Ronchamp, France, 1956
- 3. Church of Saint-Pierre de Firminy, France, completed only in 2006
Somebody forgot Moscow

- Le Corbusier eagerly participated in the competition to build the “Palace of the Soviets” in Moscow in 1931
- Project was under Josef Stalin’s personal encouragement
- Site was cleared by dynamiting the glorious “Cathedral of Christ the Savior”, a perfectly sound building
Architecture of the sacred?
“We must kill the street!”


• Was obsessed with erasing street life and daily human interaction

• Are Le Corbusier’s ideas an expression of his psychological problems?
The fate of “Pinceau”

- Was Le Corbusier’s favorite dog
- After Pinceau died, Le Corbusier had the skin used to bind his favorite book
- He bound Cervantes’ “Don Quixote” in Pinceau’s fur
Inhuman urbanism

- Le Corbusier was pathologically obsessed with destroying traditional urban fabric
- Collaborated with the Nazi-supported Vichy regime, urging Marshall Petain to destroy Algiers during the war
- He finally convinced the post-war French occupation authority to do it
Model for urbanicide

• In destroying Algiers, Le Corbusier showed a fanatical hostility against traditional Islamic urbanism
• The Arab/Islamic world noticed this, and has never forgiven the West
• Mohamed Atta wrote his thesis on the modernist urban destruction of Aleppo
The angel of urban death

- Cover of Le Corbusier’s book containing his plans for destroying Algiers has a drawing by him of the Angel of Death
- Resembles representations of Satan found in various images from different cultures throughout history
Pazuzu (Iraq, 500BC)
Satan as androgynous goat
Le Corbusier’s angel of death
Things only got worse

• Contemporary buildings go far beyond Le Corbusier’s in producing anxiety

• In the past few decades, we have seen a descent into even more inhuman architectural experiments

• Some new art museums assault the senses, causing nausea and vertigo
Novel inhuman experiments

- Extend the sensual assault of blank, forbidding concrete or glass walls
- New techniques include: blobs; oozing forms; translucent walls; curvilinear shiny metal surfaces; zigzags; spikes
- All of these tectonic typologies generate user anxiety, but no-one cares
Anxiety-producing versus life-enhancing geometries
Media collusion

• Architecture critics write intelligent (but false) arguments that praise inhuman design experiments
• They use the language of technology to erase human feelings about form and place, disguising or denying the anxiety
• Convince the rest of the world to eagerly import “fashionable” designs
Mapping sadism onto built form
Market-driven pathologies

• Our consumer culture is passively masochistic in the face of media and academic authority

• Clients pay good money to live in a building that makes them ill-at-ease

• Museum-goers buy an entrance ticket to feel nauseous in an Art Museum
Global capital in the service of inhuman ideology

• Discards and erases architectural traditions the world over
• Governments often force this on their people — “for their own good!”
• An aggression towards humanistic traditional architectures, yet many people welcome this as “progress”
Architecture as nourishment

- Morally nourishing architecture through life-enhancing qualities of pattern, color, geometry, rhythm — gives satisfaction for user
- Architecture can also bring out the darkest regions of the human soul: nihilism, schizophrenia, sadism, power — gives satisfaction for architect
Stop inhuman experiments!

• Simply require the same standards as with medical human experiments
• But architects are not interested in the effects of their creations — dogma of abstract form still rules
• This development can only be market-driven, therefore educate the clients
D. Architectural education

- Why are we training our students to design buildings detached from nature?
- I wish to put back the component of integrity into architecture schools
- Re-situate in academia and the media an obligation towards human beings
- Re-orient design in a totally different direction from the spectacular image
Contemporary design

• Architecture schools now teach courses in algorithmic design — a new interest
• But algorithmic design as a purely formal approach creates monsters
• A biophilic worldview guarantees designs integral with natural systems
Inhuman algorithmic design

• Generates anxiety disguised as a celebration of novelty — the search for “playful” abstract forms
• Take “cute” results of a geometrical algorithm and use them to design an inhuman building or urban region
• No human constraints applied — biophilia, adaptivity, pattern languages
New algorithmic design (unbuilt)
Training architecture students to act without any conscience

• Architecture schools teach students to create novel forms without thinking about future inhabitants
• Promote architecture as a sculptural art never meant for human occupation
• “Just a game” — oblivious of the moral responsibility for their designs
Denial of human qualities validated by famous names

- Famous architects manipulate forms while ignoring living beings
- Architecture schools teach students values based upon buildings as totemic objects — without humans
- Is there an innate integrity that stops young architects from mindlessly practicing an inhuman architecture?
Philip Zimbardo

- Psychologist who undertook the “Stanford Prison Experiment” — students turned into sadistic prison guards when given authority

- Similar experiment by Stanley Milgram — students administered lethal electric shocks when ordered to do so (they didn’t know the current was off!)
Question of responsibility

• Zimbardo investigated the Abu Ghraib prison scandal (Baghdad)

• His findings — ordinary intelligent people will commit atrocities if they believe they are following authority

• Therefore, need to train students to accept responsibility for their designs!
“Intelligence-Based Design”

• Trilogy by N.S. and Kenneth Masden
  • A. “Architecture: Biological Form and Artificial Intelligence” (2006)
  • C. “Intelligence-Based Design: A Sustainable Foundation For Worldwide Architectural Education” (2008)
New approach to architecture and education

- Uses human intelligence to design and build the most humane environments
- Utilizes the most recent scientific knowledge about human wellbeing
- Respects level 3: the spiritual level
- Introduces opposite methods from formal and image-based design
Conclusion

- Teach students why a cute design on the computer screen can become a monster when actually built
- Their responsibility to learn techniques for evaluating the effects their designs will have on human beings
- Design integrity: moral and natural