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Senseable Cities
THE FUTURE OF THE CITY SEMINAR

A seminar organized by the MIT Senseable City Lab
In collaboration with Yale University Press

Spring 2014; 9 Unit H-Level Graduate

Instructor: Carlo Ratti
Teaching Fellow: Matthew Claudel
Time: Mondays, 1:00-4:00pm (First class, Feb 10)
Room: MIT 4-251
Contact: senseable-class@mit.edu
Introductory Session: Monday, 3 February, 4:00pm-5:30pm, Room 9-450A

Course Description

The course objectives are to develop ideas and references surrounding key concepts in the domain of future urban science through short written assignments, critical discussion, and a final synthetic analysis at the culmination of the semester. Senseable Cities | THE FUTURE OF THE CITY will be guided by three key questions:

What forces will direct urban evolution? How are new smart technologies redefining urban life? And how will this change the discipline of urban planning - even propelling the emergence of a new science of cities?

These questions are derived from a forthcoming book titled the Future of the City, one of the inaugural volumes of the FUTURE series by Yale University Press (to be published in 2015) that will focus on the urban futures. The title has been commissioned to Carlo Ratti with Matthew Claudel and the Senseable City Lab, yet the writing process itself will be opened and oriented by the FUTURE OF THE CITY seminar: a choral exploration of our common urban future.

THE FUTURE OF THE CITY seminar will follow the structure of the book, with researchers and students discussing one chapter per session and critically expanding the argument and its references over the course of the semester. Several dimensions for the future city will provide a framework for discussion. Each will be an exercise in speculative research, inspired by Buckminster Fuller’s anticipatory design science: an intellectual exercise - developed through a course at MIT in 1956 - that methodically applied certain strategies to pressing real-world situations.

THE FUTURE OF THE CITY continues a tradition of similar endeavors that have tied academia to application, from Bucky Fuller to Rem Koolhaas' Project on the City or Venturi / Scott Brown’s Learning from Las Vegas. The intellectual explorations of the students will be synthesized - and acknowledged - in the final book. THE FUTURE OF THE CITY is the next in a history of crowdsourcing and collective writing through a small seminar group. Join us to
Students interested in joining the seminar must submit a short writing sample, a CV and a brief statement of intent (no more than 300 words) after the introductory session. For more details on this process, please join the introductory session on Monday 3 Feb.

Requirements

Work for the seminar will include:
A. Each week will focus on one dimension of the future city (listed below). Reference material will be provided during the week prior to the session, and students will develop a short response (1-2 page) for that week’s topic.
B. Each student will be responsible for taking an active leading role in one of the sessions during the course of the semester, which may then become the topic of his or her final paper.
C. Final paper, synthesizing the weekly discussion and collected references produced during the student’s week of focus and adding a body of deeper research.
D. Active participation in discussion through the course of the semester.

Investigation of the individual urban dimensions may include, but is not limited to:
— Definition of the trend and evidence of it in cities today
— Precedents for the trend in specific cases
— Informed prediction for how it will change city form
— Questions to guide discussion and orient future work in this dimension

Grading and Expectations

30% Final Written Paper
50% Weekly Responses
20% Participation

All readings for the seminar will be on the Stellar class server should be completed in advance of each class meeting. Please contact the TF with any questions.

Course Outline

Senseable Cities | THE FUTURE OF THE CITY will be oriented by two background discussions, and subsequently track ten dimensions of urban space, concluding with a depiction of a new urban science.

A. How to predict the future city?
Paleofutures. Retrospective visions of urban evolution: failed predictions from the past. Designed Approaches: how to avoid the same fate? Bucky Fuller and Anticipatory design.
Speculative design. A New Methodology: extrapolating present trends, positing scenarios, reverse engineering the future.

B. The convergence of bits and atoms
The birth of the Internet and its urban implications. Cairncross’ death of distance hypothesis in the 1990s. Is this the death of cities (Gilder et al.)? The convergence of bits and atoms at the turn of the century. New layers on urban space. Smart dust and ubiquitous computing take over. Sensing and actuating space in real time. The emergence of the “smart” or senseable city.

1. Participation 2.0

2. Smartphones and the city in your pocket
Cyborg citizenship: from Haraway to Harrison. The city inside our pockets. Real time everything: from Uber to Grindr. Data collided: combining different streams of information. The smartphone also as a sensing platform: from your pocket to the city. Quantifying yourself: from Co2Go to Whitings. From cyborgs to smart mobs: the emergence of swarming behavior.

3. The city replies

4. Sentient buildings
Towards an interactive architecture. Sensing and actuating at the building level. New responsive materials and the digital fabrication chain. Architecture as user interface design. Responsive input into the design process: open source architectures. Integrating computing in the building process: feedback loops from design to inhabitation. The occupant takes control.

5. Directed energies
heart(h)s.

6. The passenger city

7. Penniless economies

8. The factory next door

9. Hacking the city

10. The world’s classroom

Conclusions: Toward a new city science
Defining design and science: the way things are, the way things could be. Accelerating evolution by design: proposing and realizing desirable futures. Prediction as a productive exercise: the need of disciplinary convergence. The development of ‘urban demos’: dipping a toe into the future? Working together to build a common participatory future. Towards a collaborative speculative design: the future manifest(ed).
MIT Notes

Disabilities: If you have a documented disability, or any other problem you think may affect your ability to perform in class, please see the instructor early in the semester so that arrangements may be made to accommodate you.

Academic Integrity: Plagiarism and cheating are not acceptable. Never (1) turn in an assignment that you did not write yourself, (2) turn in an assignment for this class that you previously turned in for another class, or (3) cheat on an exam. If you do so, it may result in a failing grade for the class, or suspension, subject to investigation. Please see the instructor or TF if you have any questions about what constitutes plagiarism.