Spring 2022

IF BUILDINGS COULD TALK: ART AND BUILDING TECHNOLOGY FOR INTERCONNECTED ENVIRONMENTS

ARCH TECH 14364 ARCHA4854
TECH ELCTIVE   FULL SEMESTER
Lectures: Monday   11 AM - 1 PM
3 PTS   409 AVERY
Sharon Yavo Ayalon, Ph.D.
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Kiefer Technic Showroom by Ernst Giselbrecht + Partner, Steiermark, Austria, 2007

The Tijuana Projection, by Krzysztof Wodiczko, Tijuana, 2001

Blue Bear, by Lawrence Argent, Colorado, Denver, 2005

A mapping by 1024 Architecture, Lyon, France, 2010

COURSE DESCRIPTION

The histories of art and cities are intertwined in multiple ways, showing that art poses the power to either duplicate and reproduce existing power relations or to subvert them, to enhance distinctions and boundaries, or to undermine them. Similarly, technology has always been part of the progress of cities, and it poses resembling powers. The combination of both can become a powerful tool to elicit social change in innovative ways.

This course targets the question of distinctions and boundaries through the way a building interacts with its immediate surroundings - both physical and social. Using the combination of art, data, and technology, students will engage with the societal and political challenges of the urban arena. Students will acquire not only analytical and theoretical knowledge but also the opportunity to intervene and affect the building they learn in – the GSAPP Avery Building and the urban environment surrounding it - Harlem Neighborhood.

The course is based on a dual format of a seminar and a workshop. The seminar format, lectures, readings, and site visits introduce the theoretical and critical aspects of technology-driven artistic interventions. Students will examine past and present precedents of collaborative and participatory art projects that use advanced technology and big data to engage communities in shaping their environments. Through the workshop format, students will develop a suggestion for an artistic intervention to analyze, criticize, understand, and create better connections between GSAPP and Harlem.

In the mid-term presentation, each team will propose a technology-driven artistic intervention, and through a peer-review process, we will select one of the proposals to be built on-site. Then, throughout the second half of the semester, we will collaboratively work on the final assignment: developing, building, and installing the selected proposal: a prototype version on a 1:1 scale, on-site.

LEARNING OBJECTIVES

To identify, analyze and represent the different relationships between buildings and their urban environments, engaging with complexity of the physical aspects of those relationships as well as the social and political ones.

To analyze and demonstrate the means by which technology-driven artistic interventions may be wisely applied as part of the architectural design.

To develop sensibility and ability to address complex social problems and identify where technology-driven artistic intervention may lead to innovative solutions.

To intervene and affect a specific building and urban environment, through technology-driven art projects.

WORKLOAD AND EVALUATION CRITERIA

The course will require weekly readings, active participation in class discussions, individual assignments, a midterm group project and a final collaborative project.
In addition to readings, each student will be required to review a case study of technology-driven artistic interventions, present them to the class, and lead a group discussion. The case studies will be assigned at the begging of the semester and will be presented at the end of each lecture.
The project will be a semester-long group project that develops a comprehensive suggestion for an artistic intervention to analyze, criticize, understand, and create better connections between the Avery Building of the Graduate School of Architecture, Planning, and Preservation and Harlem Neighborhood.
The project will include
1. Analytical thinking - Building and site analysis: defining the stakeholders and communities.
2. Conceptual thinking - developing the initial idea through a conceptual model.
3. Collaborative thinking - what do we want to connect and to what? - deliverable - interaction strategy
4. **Midterm: The proposal** - an art intervention proposal using sketches, diagrams, 3D models and animations to best represent your idea.
   At the end of this session the students will choose the final project.
5. **Final Project: Tech-Driven Art Intervention** - Can the Avery Building Talk?
   During the second part of the semester, we will collectively build a prototype of the selected proposal on a 1:1 scale, on-site.

   All assignments will be submitted digitally and presented to class.

Evaluation
Participation and discussions   5%
Case Study Review   10%
Midterm Project Proposal (each milestone equals 10%) 40%
Final Project   45%
Each students' contribution to the final project will be determined by the group.

Grade	%
High	> 90%
Pass	60 – 90%
Low Pass	50 – 60%
Fail	< 50%

ACADEMIC INTEGRITY & PLAGIARISM

Plagiarism is defined as the use of work or concepts developed by other individuals without

proper attribution or citation. Unique ideas or materials taken from another source for either written or oral use must be fully acknowledged in academic work to be graded. Examples of sources expected to be referenced include but are not limited to:
1. Text, either written or spoken, quoted directly or paraphrased.
2. Graphic elements (figures, charts, graphs, images).
3. Mathematical proofs and/or scientific data.
4. Concepts or material derived from the work, published or unpublished, of another person.
Students should take advantage of plagiarism checkers available on the library website, and for editing and writing assistance they should contact the Columbia University Writing Center.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Accommodations may need to be added or adjusted should this course shift from an oncampus to a remote format. If you have a disability and are registered with the Columbia Disability Services, please use their online system to notify me of your accommodations and discuss your needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with Disability Services, I encourage you to contact them at disability@columbia.edu

STATEMENT OF SUPPORT FOR STUDENTS' HEALTH & WELL-BEING

I encourage you to take care of your health and wellbeing. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, applying the recommended COVID-19 precautions, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.
If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CPS) is here to help 24/7: call 212-854-2878 and visit https://health.columbia.edu/content/counseling-and-psychological-services

SYNCHRONOUS ONLINE CLASS RECORDING

Our class sessions will be audio-visually recorded for students who are unable to attend at the scheduled time. Students who participate with their camera engaged or who utilize a profile

COURSE SCHEDULE

WEEK	LECTURE	WORKSHOP
Module 1: INTRUDUCTION - Between Art, Technology, and Social Structures		
WEEK 1 1/24/22	Course Review + Introduction: The Interwind Histories of Art, Public Space and Social Structures	Project and Assignment Review+ Class exercise: Precedents Miro

HW	Assignment 1: Precedents Miro, Due: 1/30/22 11pm	
WEEK 2 1/31/22	Where Does Technology Fit In? Facades that Talk – Versus Interactive Public Art. Introducing the Wizard of Oz methodology Reading: Geleff, Say It Loud: 7 Façades Communicating with Text https://architizer.com/ Shunyu, Build Interactivity into Public Art: Technology I	Precedents Miro
HW	For next class bring ropes, strings, tapes, chalks. Any other tool/material which will help you make a removable mark in urban space.	
WEEK 3 2/07/22	Social Structures, Academia and Gentrification - Does Columbia University Change Harlem? Reading: -Recoquillon, C. (2014). Neoliberalization and Spatial (In)Justice: The Gentrification of Harlem. -Velázquez, and Marr, Columbia University Gentrifying -- Harlem: Who Is the Neighborhood Improving For?, 2009.	**Body/Place Exercise** Documentation Due date: 2/8/22 11pm.
HW	Assignment 2: Site Analysis, Due 2/13/22 11pm.	
Module 2: ART AND PLACE – The Place as a Generative Force		
WEEK 4 2/14/22	Site Specificity, Collaborative, Relational and Situational art Reading: -Bishop, C. 2006. The Social Turn: Collaboration and Its Discontents. Artforum 44, no. 6: 178–183. -Kwon, M. 2002. One Place After Another. Cambridge and London: The MIT Press.11-33	Presentations of the Site Analysis Exercise
HW	Assignment 3: Communities Shaping Place, Due: 2/20/22 11pm.	
WEEK 5 2/21/22	The Art of Place Making - Artists as Allies in Equitable Community Development Reading: -Friedmann, J., 2010. Place and place-making in cities, Planning Theory & Practice, 11(2),.149-165. - Pang, L., 2016. Arendt in Hong Kong: occupy, participatory art, and place-making. Cultural Politics, 12(2),.155-172.	Presentations of the **Communities Shaping Place** posters
HW	Assignment 4: Art Intervention Proposal, Due: 3/07/22 11pm.	
WEEK 6 2/28/22	Guest Lecture - Street Lab https://www.streetlab.org/programming-nyc-public-space/play/	Work time to develop your proposal alongside Individual instructions session.
WEEK 7 3/07/22	Groups Proposal Presentations and Elections of the Collaborative Project.	
WEEK 8 3/14/22	**SPRING BREAK**	
Module 3: TECHNOLOGY - Prototyping Possible Futures		
WEEK 9 3/21/22	The state of the arts in Interactive facades Reading: Hosseini, S. M., Mohammadi, M., & Guerra-Santin, O. (2019). Interactive kinetic façade. *Building and Environment, 165*.	Building the collaborative project: Project management and roles allocations

WEEK 10 3/28/22	Can Buildings Talk? Human Building Interactions - Responsive and Flexible Buildings Reading: Wizard of Oz (WoZ)—A Yellow Brick Journey Alavi, Hamed S., et al. "Introduction to Human-Building Interaction (HBI) Interfacing HCI with Architecture and Urban Design." (2019): 1-10. TED Talk: Jeanne Gang on Buildings That Create Community	Work time to develop your proposal, and Individual instructions session.
WEEK 11 04/04/22	Games and Gamification – The Role of Playfulness in Building and Environments Reading: Elmira Jamei, et al. (2016) Investigating the Role of Virtual Reality in Planning for Sustainable Smart Cities. Sustainability.	Prototype mockup Work time to develop your proposal, and Individual instructions session
Module 4: SOCIAL STRUCTURES – Art Shaping Communities Shaping Art		
WEEK 12 04/11/22	A Glimpse into the World of Social Theory – Distinctions, Social and Spatial Inequality and the Role of Art and Technology in Social Power Relations Reading: Bourdieu, P. 2019. Distinction: A Social Critique of the Judgement of Taste Food and Culture: 141–150. Yavo Ayalon. "Can art breach boundaries?" *Journal of Urban Design* 24.4 (2019): 617-639.	Work time to develop your proposal, and Individual instructions session
WEEK 13 04/18/22	Technology Shaping Communities – Critically Considering the Ways in Which Technology Redefine Public Spaces and Buildings Reading: Zebracki, M., J. Luger. 2019. Digital Geographies of Public Art: New Global Politics. Progress in Human Geography 43, no. 5: 890–909. Yavo-Ayalon, S. 2020. Project Ashdod. Journal of Urban Design	Work time to develop your proposal, and Individual instructions session
WEEK 14 04/25/22	Final presentation Tech-Driven Art Intervention - Can the Avery Building Talk?	