TOOLS FOR SHOW

SUMMARY

SPRING 2019

VISUAL STUDIES

Tools for Show is a course about creating interactive prototypes for storytelling and architectural communication. Taking the idea of discovering multiple identities and qualities and values of an entity through its replication, students will create a series of virtual and analogue duplicates of small objects, their own bodies and interior spaces.

Working through the design and implementation of a virtual and physical prototype will equip students with a particular toolset and connections for an expanding occupational field of display and exhibition design. The final display projects will form an exhibition of prototypical installation methods in itself.

INSTITUTIONAL COLLABORATION
We will collaborate with the Intrepid Air and Space Museum in reconstructing the interior of the currently inaccessible Sick Bay.

COLLABORATION WITHIN GSAPP
This class will be conducted in dialogue with Prof. Jorge Otero-Pailos and Andreas Keller's course A6714-1 *Experimental Preservation: Smell,* which will focus reconstructing the historic smell of the original Sick Bay.

A4968-1 and A4969-1
200 BUELL HALL
Thursday 11 AM - 1 PM

BIKA REBEK

TOOLS FOR SHOW

THESIS

Tools for Show is technical and conceptual exercise in copying. While architecture traditionally has been seen as a one-off, unique and specific work, this class is exploring techniques of replication, versioning and prototyping. In the age of digital reproduction, authenticity of an object or experience can only be validated through relentless dissemination. Through the multiplication of objects, bodies and spaces, Tools for Show is exploring the dialogue between physical and digital versions as a creative process in itself.

Digital means of replication are rapidly advancing with new scanning techniques, printing methods and AR apps being released daily. The class will embrace new technologies along historical references to find new ways of re-making the existing.

It is better to be good than to be original.
Ludwig Mies van der Rohe

Enough original genius. Let us repeat ourselves endlessly.
Adolf Loos

The intensity of the search for the original depends on the amount of passion and the number of interests triggered by its copies. No copies, no original.
Bruno Latour & Adam Lowe

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SESSION A - RADICAL REPLICAS

01. THE OBJECT

Radical replicas will look in detail at various scanning and 3D printing methods, using three different scales to explore specific techniques. The first replica is at the scale of a small object that should be reproduced at 1:1 scale. For this first assignment students will scan objects using the structured light scanner. The object will be reproduced using Stereolithography (SLA) 3D Printing on a Formlabs 2.

02. THE BODY

The second scale is that of the body. Each student will be scanned via photogrammetry and create a 3D printed reproduction of themselves at 1:10 scale. For this assignement students will use the Uprint/Dimension printer.

03. THE SPACE

Finally, each student will scan and 3D print an interior to scale. Here we will use a Makerbot/ Prusa to 3d print the space.

end of phase 01

The end of phase 01 will be marked by each student having completed at least three scanning methods as well as three 3d printing methods. These three replicas will be recombined virtually in Session B.

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SESSION B - PROTOTYPES

01. ONLINE
Starting from three models acquired by different scanning techniques, the first step will be to bring these into a single virtual space. This model will then be uploaded to a website, to allow for real time viewing of the objects anywhere. As a next step, we will design for stories around the various objects, surface and textures displayed in the model.

02. ON SITE
The next step will be to design a way for the physical and the digital artifacts to coexist through AR. Place virtual objects in a physical space and then placing a virtual space around physical objects. What other ways can the physical and the virtual be recombined?

03. ON VIEW
Finally the class will be thinking together about how to create an common archive, where all the objects will be drawn together to form an exhibition. Physical and virtual duplicates will co-exist and inform one another.

end of phase 02
The class will present these virtual and physical artifacts in an exhibition.

PRELIMINARY SCHEDULE

SESSION A - RADICAL REPLICAS

Week 1 - Introduction: Architecture and Authenticity
Plato's shadow - Creating detailed meshes of small objects with a structured light scanner
Week 2 - The virtual body - Avatars and Face Ids
Doppelgänger - Scanning the body through Photogrammetry
Week 3 - Augmented ways of measuring space (double session)
Augmented Reality - Generating interior spaces through AR and 3D space tracking
Week 4 - Excursion
Behind-the-scenes tour at the Met
Week 5 - Mesh processing
Optimizing meshes, filling holes, preparation of exhibition
Week 6 - Exhibition with invited guests

SESSION B - POTENT PROTOTYPES

Week 1 - Introduction: Prototyping principles
Agile design, iterative thinking and developing virtual prototypes
Week 2 - Designing for and uploading to the web
Setting up the scene, exporting through Grasshopper to the web
Week 3 - AR integration
Recombining the virtual with the physical
Week 4 - Interaction Design and Product development
Designing interactivity and virtual storytelling
Week 5 - Working session
Preparation of review and exhibition, special topics
Week 6 - Exhibition of physical and digital artifacts

GRADING

Tools for Show being an experimental software course, class participation and curiosity are extremely important factors. Since we are embarking on new terrains, curiosity and sharing are just as important as production and execution. Grading is done by four factors, weight equally:
- class participation and sharing of knowledge
- project execution
- amount of learning growth
- amount of risk taken

BIBLIOGRAPHY

- Mario Carpo: The Alphabet and the Algorithm
- Winy Mass: Copy Paste: Bad Ass Copy Guide
- Inside the White Cube: The Ideology of the Gallery Space
- Authenticity?: Observations and Artistic Strategies in the Post-Digital Age
- Ines Weizman: Architectural Doppelgängers
- Mari Lending: Plaster Monuments: Architecture and the Power of Reproduction
- Bruno Latour & Adam Lowe: The migration of the aura or how to explore the original through its fac similes
- Andre Paul Jauregui: Heritage Reproduction in the Age of High-Resolution Scanning: A Critical Evaluation of Digital Infilling Methods for Historic Preservation.

REFERENCES

Tools for Show (the online platform for exhibition design)
https://toolsforshow.com/

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MOODBOARD

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