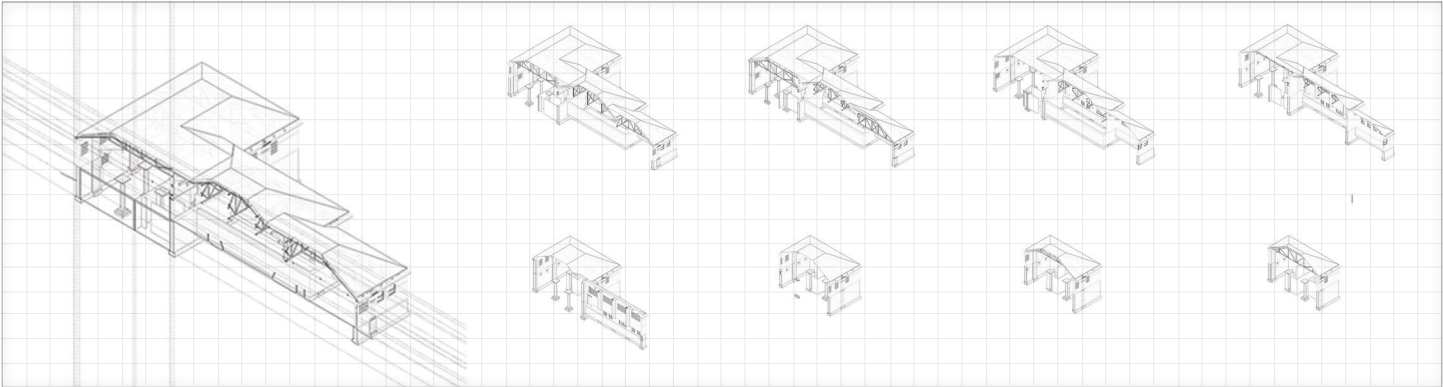# ARCH 451: ARCHITECTURE STUDIO II
1.0 THE FOUR MISUSES

Section boxes made in Revit 2018 through the Agricultural Heritage Museum | ARCH 551 | Fall 2018

SUBJECT

If the world of the orthographer was simultaneously a text and a drawing, the world of the postorthographer is simultaneously an image and a model – an electrical image and an electrical model, signally mapped onto one another. Because all signalization requires the materialization of a statistically managed signal-to-noise ratio, all postorthographic image models are probabilistic in their underlying logic.

- John May in *Everything is Already an Image*

The Four Misuses focuses on the ontological transition from orthographic drawing and modeling to post-orthographic imaging, the impacts of automated processes, and the role of implementing sectional practices in a post-orthographic setting by critically examining specific tools and commands used in Revit. We will work through constructional images in order to manifest constructional material conditions and constructional narratives. Whether printed or projected, images are the outputs of electrical signalization and result from acts of data processing. They are dynamic and have the ability to be incredibly imprecise, in spite of our tendency to think of them as fixed, precise objects. What happens to the architectural mind when it stops pretending that images or images of drawings made by computers are drawings?

Since the Renaissance, orthographic drawings have served as measured representations of the world. Orthographic drawings are notational, scaled, and their making involves slow, thoughtful hand-mechanical gestures. Post-orthographic images, on the other hand, fall prey to simulated, scaleless, automated thinking in which moments of decision-making are difficult to discern. The Four Misuses attempts to move beyond automated, scaleless thinking by transitioning between methods of orthographic representation and post-orthographic presentation. We will not solve problems, but rather bring forth questions that surround current explorations of the media we use. By acting upon existing structures and designed objects through methods of projection, this project exemplifies a pedagogical approach that stems from the "misuse" of Revit as a generative sectional tool for exploring constructional material conditions and narratives.

SCHEDULE

Week 01:	M.	08/26		Start The Constructional Performance Apparatus
	W.	08/28		Visit the Agricultural Heritage Museum Download Revit Start Misuse 01 & Misuse 02
	F.	08/30		Read *HUGHES_The Architecture of Error_Intro.* Misuse 01 Due
Week 02:	**M.**	**09/02**		**No Class - Labor Day Holiday**
	W.	09/04		Misuse 02
	F.	09/06		Misuse 02

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SCHEDULE CONTINUED	Week 03:	M.	09/09	Read *MAY_Everything is Already an Image* Misuse 02 Due Start Misuse 03
		W.	09/11	Visit the Agricultural Heritage Museum Misuse 03
		F.	**09/13**	**No Class - AIASD Convention**
	Week 04:	M.	09/16	Misuse 03
		W.	09/18	Read *FORD_The Architectural Detail_Ch 4* Misuse 03
		F.	09/20	Misuse 03 Due Start Misuse 04
	Week 05:	M.	09/23	Misuse 04
		W.	09/25	Misuse 04
		F.	09/27	Misuse 04
	Week 06:	M.	09/30	Misuse 04
		W.	10/02	Misuse 04
		F.	10/04	Mock-Performance
	Week 07:	**M.**	**10/07**	**The Four Misuses Performance**

The schedule will work in accordance with the course website. Details will be outlined in each class session.

PROCEDURES & METHODS

The procedures and methods for The Four Misuses are not mutually exclusive. They will weave and push against one another as the project unfolds. Students will work in pairs.

Constructional Performance Apparatus: Constructional performances will be explored through the continual construction of a constructional performance apparatus. The apparatus will include a shared imaging space, a shared screen, and a single desk. The apparatus will be reviewed at the end of the project as part of each team's performance.

  1- Shared Imaging Space (27 Students):

   - Share with ARCH 451, Section 2.

   - Darken for projection.

   - Hold lectures and discussions surrounding the readings and tools.

  2- Shared Screen (2 Students):

   - Establish an existing surface in the beginning of the project.

   - Construct a screen at the end of Misuse 03.

   - Build no larger than 3'-0"l x 3'-0"w x 8'-0"h (subject to change).

  3- Single Desk (1+ Students):

   - Include a computer with a working version of Revit and a Box Folder.

   - Label files according to Date_Title (i.e. 190828_Section Cut 3).

   - Use assigned templates that may be altered through experimentation.

PROCEDURES & METHODS CONTINUED

MISUSE 01: Establish a work plane in the vertical orientation for sectional elements to attach to. In Revit, the default work plane is in plan. Misuse 01 works against the tool by establishing a default work plane in section.

1- The Architecture of Error:

- Read *HUGHES_The Architecture of Error- Intro.*

- Define precision and error.

2- Constructional Material Conditions:

- Interrogate elements and materials in the Agricultural Heritage Museum.

- Document what currently exists by cutting sections through the building.

MISUSE 02: "Draw" (model) section cuts upon the established work plane using model and detail lines. In Revit, sections are constructed by attaching system, loadable, or in-place families to the default work plane in plan and then cutting the families using a section box. Misuse 02 works against the tool by establishing a pseudo-orthographic method.

1- Everything is Already an Image:

- Read *MAY_Everything is Already an Image.*

- Define representation, orthography, drawings, presentation, pseudo-orthography, post-orthography, images, automation, modeled lines, modeled elements, displaced elements, and cut elements.

2- Constructional Images:

- Develop images in order to interrogate the material conditions of the Agricultural Heritage Museum.

- "Draw" section cuts through the existing building.

- Design the threshold for a new addition.

MISUSE 03: Layer the "drawn" (modeled) section cuts with the modeled section cuts by modeling system, loadable, or in-place families and cutting them with a section box. In Revit, section cuts are made using automated section boxes in 3d or by cutting through a plan. Misuse 03 works against the tool by layering two methods for making section cuts in order to slow the process for seeing and constructing sections.

1- The Architectural Detail:

- Read *FORD_The Architectural Detail_Ch 4.*

- Define selective detailing, animated joint, articulated joint, adjacent joint, dissonant joint, autonomous detail, system family, loadable family, in-place family, displaced views, cut views, stitched views, and section box.

2- Constructional Narratives:

- Add public space, no more than 6,000sf, north of the existing building.

- Establish a part to whole relationship between the existing and new.

- Program the transition by changing awareness in engagement.

MISUSE 04: Present layered images upon a represented layered physical screen. In Revit, the digital model is presented as a dynamic projection or a set of static, pseudo-orthographic views. Misuse 04 works against the tool by combining representational, orthographic media and presentational, post-orthographic media in order to think through automation, scalelessness, and notational deletion.

1- Constructional Performances:

- Decide what to present as image and what to represent as physical.

- Decide what to cut, suppress, hide, reveal, and articulate.

- Sequence and animate the constructional images.

- Narrate the performance verbally, textually, or both.

- Diagram and document the performance.

MATERIALS   Materials will be needed for constructing the Constructional Performance Apparatus.

        1- Shared Imaging Space
            - Black-out film
            - Projectors + adapters
        2- Shared Screen*
            - Dimensioned lumber
            - Material(s) to project upon
            * Materials depend upon the representational intentions of the student
        3- Single Desk
            - Computer
            - Revit 2019 or 2020
            - Box Folder (to be assigned)

KEYWORDS

- Precision:

- Error:

- Representation:

- Orthography:

- Drawings:

- Presentation:

- Pseudo-orthography:

- Post-orthography:

- Image:

- Automation:

- Modeled lines:

- Modeled elements:

- Displaced Elements:

- Cut Elements:

- Selective Detailing:

- Animated Joint:

- Articulated Joint:

- Adjacent Joint:

- Dissonant Joint:

- Autonomous Detail:

- System Family:

- Loadable Family:

- In-Place Family:

- Displaced Views:

- Cut Views:

- Stitched Views:

- Section Box:

No more drawings, only images. No more orthography, only telematics. No more points, only addresses. No more lines, only associations. No more geometry, only statistics. No more syntax, only source code. No more tectonics, only commands. No more machines, only apparatuses. No more subjects, only users. No more stasis, only animation. No more research, only search. No more contemplation, only transmission. No more representation, only presentation. No more perception, only sensation. No more aesthetics, only physiology. No more history, only archiving. No more future, only probabilities. No more signification, only signalization.

- John May in *Everything is Already an Image*