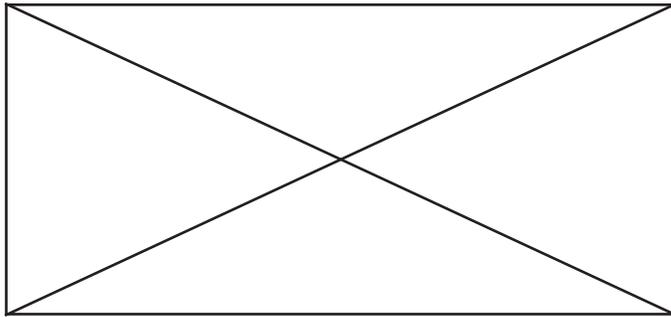


Computing Drawing: Animating Thick Surfaces

2.1 Designing with Resistance from Site and Program



This is the second and final phase of the course. It will begin with two short transitional exercises. Subsequent directions that the work will take are to a large extent at your discretion. You are charged with designing a process for designing a building. A site and program will now be introduced. They are not meant to be the subject of inquiry, but devices to further your exploration. The program and site will provide resistance, but successfully responding to their forces is only the beginning. The “big question” that initiated our work must continue to be addressed: how does drawing mediate/influence/fuel/disrupt the relationship between you, computing and architecture?

Obviously, we will keep drawing. Some of the drawing will be representational. Other drawing will operate entirely within the space of the page and serve as autonomous works of art. How, with what media, and with what machines your program is open. We will consider and discuss the role of automation, indirection, instruments and knowledge under the conceptual umbrella of authorship.

The program is a racquetball club: four courts for casual play and training (which should have a way for a few onlookers to observe play), one court for official play (with a space for a referee with as complete a view of the court as possible) and spectatorship by a public audience of around 20, changing area and restrooms, a controlled entrance for members, a small office for a staff of three people, a lobby large enough to perform member services, and a member's lounge. This program is useful to us because it involves discrete spaces and necessitates control over views. This club's financial and cultural obligations will be best met by being “transparent” although the sport of racquetball requires a degree of isolation from the outside world.

The site is in Boston, MA and is a parcel of land bounded by Berkeley Street, Cortes Street, Arlington Street, and the Massachusetts Turnpike near Backbay Station. The site is at the juncture of many speeds and forms of movement. Besides the highway, trains (the Boston subway, commuter rail and Amtrak) move along the site and offer relatively consistent but non-fixed points of view. Berkeley Street is highly trafficked by pedestrians. Cortes street is narrow, so it is prudent to consider respecting the neighboring residences' access to light and air, if not their views. Because the site is a device, not a subject, you may break any rules about zoning, height restriction, et.c, that are fruitful for your work. Remember, fruitful doesn't mean easy.

It's probably to your advantage to define rules for the site that provide your project with the most resistance and the most difficulty.

Expand upon what you have developed as your thick surface construct, although it is recommended that you remain skeptical of you own assumptions regarding how/where/why that (or those) surfaces grow into (or support the growing of) a building. As with site and program, the usual requirements for a function building—enclosure, safe means of egress, etc—are not problems on a checklist to solve but productive forces of resistance.

To begin this phase of the project, perform two separate exercises. These are to be completed by Monday April 8 and will serve as a transition between phase 1.2 and phase 2.1.

First exercise

Create a three-second animation that captures the perception of the construct designed in phase 1.2 from a moving point of view. This animation will be played at 12 frames per second, meaning it will be made up of 36 frames. Because the process of crafting the animation is as important as the experience of watching the animation, do not use any plugins or animation-specific software created by someone else to automate this process. Of course, writing your own script is encouraged. Three seconds is a short amount of time, so consider a minimal path of motion. The path might be along the outside, inside or through the construct. This path should be predominantly linear, although following a curved path along a corner, for example, might be fruitful. Consider whether the speed of motion is constant or variable. Depending on the path and your construct, your animation might seamlessly loop. Also consider if and to what extent the orientation or field of view relative to the point of view might vary over the course of the animation. Maintain a visual language throughout all 36 frames of lines rather than rendered surfaces. Continue to cultivate an aversion to the default aesthetics of software interfaces. Use a 700(wide)x800(high) pixel frame size.

To assemble this animation follow the following steps:

1. Save each frame with a sequential file name. For example: frame01.png, frame02.png, frame03.png... frame36.png
2. From photoshop choose file->open and select the first frame in the open dialog box. It should then allow you to check the "image sequence" box.
3. It will ask you to choose frames per second. Choose 12.
4. file->save for web. Choose GIF as the format. Select loop forever. Save. Drag file into a web browser window to play.

Second exercise

Create a series of diagrams that document at least five distinctly varied approaches to the program and site in term of thick surface(s). Make one drawing per type of approach (meaning a minimum of five drawings are required). Because each approach is fully conveyed in a single drawing, this likely means that these drawings will convey three dimensions. These diagrams are not sketches, but highly precise abstractions with purposeful use of a minimal language of lines and, if necessary, tone. Another way of explaining this exercise might be with the question, "What can thick surface(s) *do* with/for/around/on/among the site and program?" Each diagram should answer that question differently. Visibly title each diagram but use no other text on these images. Try not to consult with each other as you work through this exercise so as to increase the likelihood of varied responses. Print these diagrams on 7"x8" sheets in preparation for a collective discussion.

Readings

Each student is assigned one of the following reading pairs. Over the remainder of the course, you are responsible for becoming an expert on these texts and bringing the relevant conversations to our collective discussions, your work, and the work of others. You will not only need to read, re-read, and understand each text, but understand the relationships between the two. Where do these readings align, contrast, contradict or support each other? Investigate other texts referenced in each reading and the contexts within which each author was writing.

MD, PS, NW will read:

William Empson, *7 Types of Ambiguity* (excerpts)

Colin Rowe and Robert Slutzky, *Transparency: Literal and Phenomenal*

SW,MK, MJ will read:

Stan Allen, *From Object to Field*

Stan Allen, *Field Conditions Revisited*

JM,SF, W(J)J, JB will read:

Malcolm McCulough, *20 Years of Scripted Surface*

Antoine Picon, *Forward to Algorithmic Architecture*

NV, AD, CB will read:

Nigel Cross, *Designery Ways of Knowing, Design Discipline vs. Design Science*

Paul Klee, *The Thinking Eye* (excerpt)

Schedule

M 4.08 Opening discussion. Transition exercises complete

TH 4.11 New models and/or drawings, scale, content and media depend on direction established by student

M 4.15 ...TBD...

TH 4.18 ...TBD...

M 4.22 ...TBD...

TH 4.25 ...TBD...

M 4.29 Pinup with input from external reviewers

TH 5.02 ...TBD...

M.5.06 ...TBD...

TH 5.09 ...TBD...

M. 5.13 ...TBD...

Week of Final review
5.20