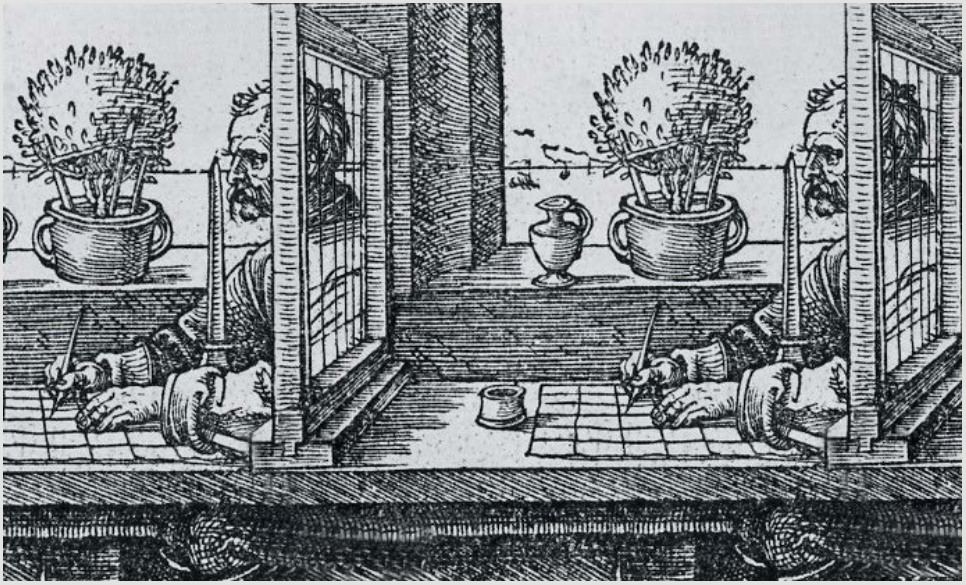


DIALECTIC VOLUMES

Harrison Tyler

April 2013

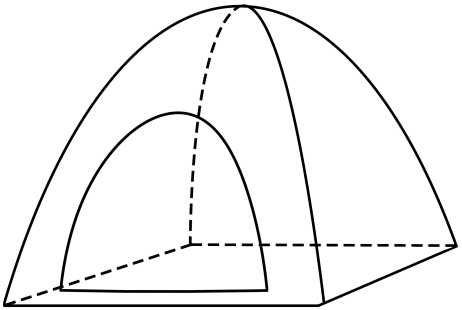


Figure T.1 (front facing)

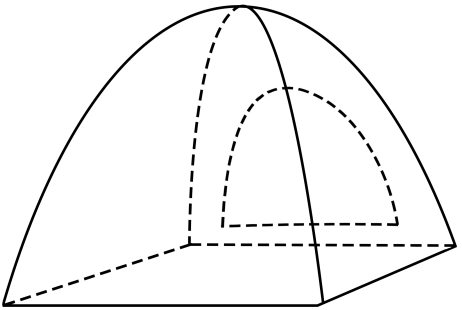


Figure T.1 (back facing)

Base diagrams:

The starting point structure *Figure T.1* is the standard contained space, a single blue pitched-tent.

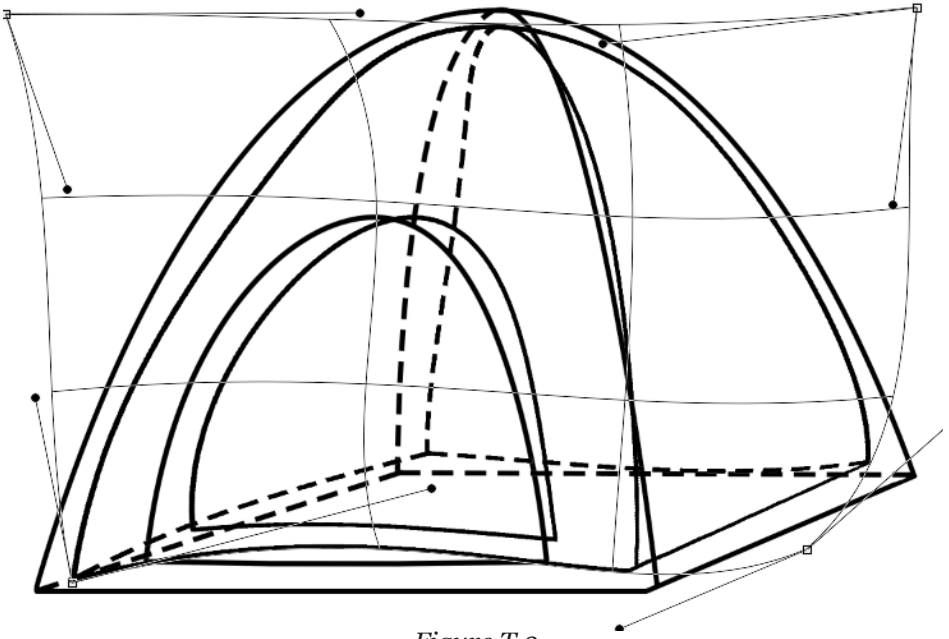


Figure T.2

Warp grid:

Figure T.2 the underlying Photoshop warp-grid that enables the digital simulation of the manipulation of tents. This model of working will be used to render prototype diagrams for the following spatial scenarios.

Tent Models is a study of the various forms of a space as a space is replaced, represented, reformed within itself; revealing the sharing-properties and the quality of (the space) to exist in multiple, layered forms. This experiment is articulated through the "nesting" of the readymade spaces of 4' x 6' camping tents. The dome tent is the ideal form and volume for this experiment- having defined yet malleable bounds; it is an accessible material that I have found to provide consistent and effective results. The structure is the launching point and base for exploration and extension of common spatial considerations, and an object and space for relativity. These properties pose questions (as many standard boundaries or spatial conventions might) about structural possibilities and possibilities for spatial perception.

1: Through these spatial situations I discuss the perceptual information involved in the understanding of volume in relation to the structural properties of the described situations.

2: The perception of volume in relation to its structure is a phenomenon of a perceived density of space; affected by time (structure in time), visual stimuli such as graphical perspective, physical stimuli such as functionality.

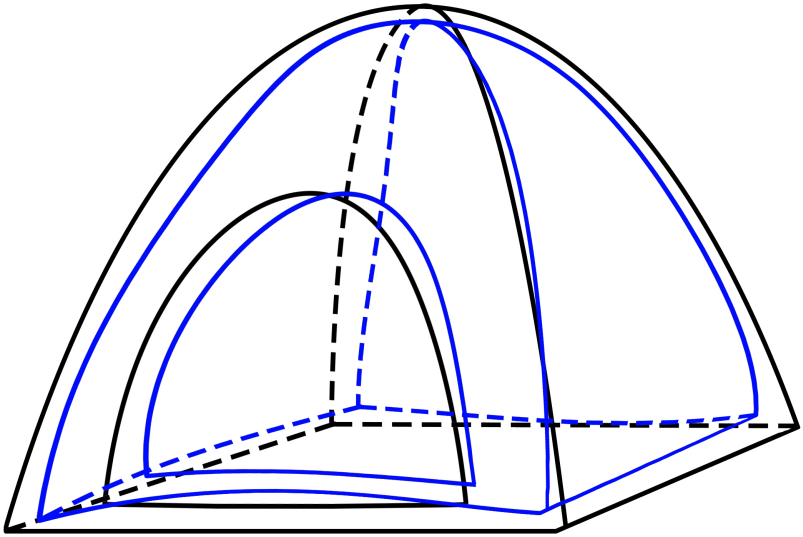
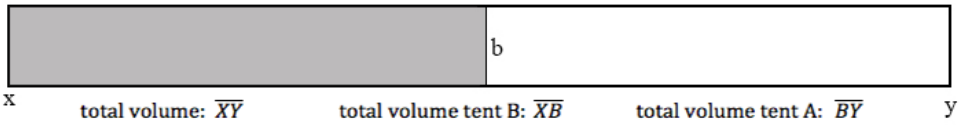


Figure T.3

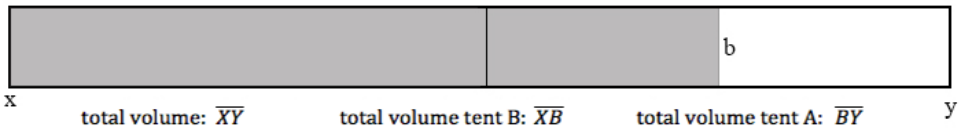
The starting point structure is the original *Figure T.1* tent, an identical tent in the same orientation: a duplicate of *Figure T.1* is pitched within.

This exercise was first performed as a structural question: can one closed form be set inside of an identical object, specifically an identically-sized object? I test the expansive properties of the tent structure as a container of space, as a defined yet malleable spatial boundary. Through the execution of the various situations described by the diagrams, I first test the structural capacity of the situation to exist in real space. With the materials for another tent in-hand, I then climb inside [tent A], a four by six foot blue tent that I had set up previously. I close the tent opening and lay out the materials for an identical four by six foot blue tent [tent B]. I decide on an orientation for the two tents shown in *Figure T.3* and proceed to pitch tent B in the same orientation as tent A, within tent A. The resulting experience is transference of volume; as tent B is gradually erected, the open space within tent A is consumed and shared by the growing volume of tent B. As described first in a graph below, tent B is partially pitched - filling half the volume of tent A:

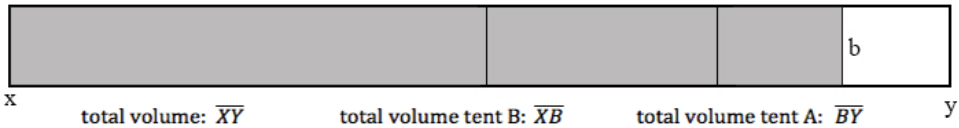
{For descriptive purposes these graphs do not account for the exact volume displaced by my body as I am inside this spatial situation. For the following examples, understand that my body exists somewhere within the total volume described in the chart}



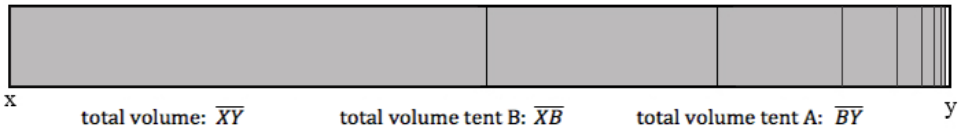
As tent B gets progressively more erected, the remaining open-volume in tent A is consumed:



And further:



By now maybe you can observe a trend in these diagrams documenting the consumed volume and the volume to be consumed; in each step, tent B consumes half of the space remaining in the preceding graph.



To skip five halving-steps further, the effects of this format of division become clearer, where there is no fully filled graph in sight, the measurement can be infinitely halved, always leaving an open-volume of ½ $\overline{BY}$. If this scenario sounds familiar, it is a reiteration of one of Zeno's "paradoxes of motion", illustrated in the paradox of Achilles and the Tortoise[1]: Achilles is racing a tortoise; before Achilles starts running he lets the slower tortoise get a head start of a distance of, say two hundred feet. Because of encountering a similar "leftover" measurement (as I have found ½ $\overline{BY}$) Achilles is unable to fill the distance gap between himself and the tortoise, he infinitely halves the distance between himself and the tortoise... and is always half way to the tortoise.

What is this infinitesimal, impassable space? Zeno argues, that this absurd situation of Archilles and the Tortoise is a valid philosophical paradox, in the realm of the dialectic where both sides of an argument are true in their own logic. It is known that a runner can actually pass a tortoise, yet the argument posed by Zeno that Archilles will never reach the Tortoise is also "true". The space between two nested tents: is the liminal space as evidence of the total volume that has the flexibility to exist effectively in two places (as perceived from within the interior). The nested tents form a Dialectic Volume: As perceived, the total volume of space in this situation is effectively passable from one tent form to the other, the space which makes up the variable is the buffer of impassible space, it is memory of tent A's original singular volume, a "doubled space" is perceived as Tent B fills that volume. This "gap" between tents is critical for maintaining the doubled volume, for without it, the ability to perceive both spaces at once is hindered and spaces (as observed) would merely transfer rather than reside continuously in each.

This perceptual occurrence is in relation to the definite structure of the tent; all perceived volumes are in relation to a physical volume. There can be a simple formula to

describe this relationship in terms of density, dividing the perceived volume by the "actual" volume. i.e. when the total volume perceived within the defined structure of Tent A is two tent-volumes (the full volumes of both tents A and B), we can divide the perceived volume: 2 by the physical volume: 1 equaling a ratio of 2; the perceived space in relation to the physical space is twice as dense as the literal, physical volume. The (inexact) measure of a perceived density of volume is possible because of the volumes existing in time, allowing interaction and manipulation. Time allows the passage between and around tents, allowing for a full experience of each tent contributing to the overall perception of usable-space.

The properties of mystery and doubling given by the "buffer" of the variable are perceptually similar to the doubling and othering formed in Dan Graham's Time Delay Rooms: (see following diagram *Figure G.1*)

Dan Graham's description:

"On monitor l a spectator from audience A can see himself only after an 8 second delay. While he views audience B (in the other room) on monitor 2, this audience sees him live on the monitor whose image can also be seen by audience A. The same Situation is true for audience B. A spectator may choose to pass from one room and audience to the other. To walk the passageway takes about 8 seconds. A member of audience A entering audience B's room would-now see the view of audience B that he had just seen 8 seconds previous when leaving the other room: but he is now part of that audience 8 seconds later. As 8 seconds have passed, the composition of the continuum which makes up audience B, has shifted as a function of time - he has joined it while other present members have arranged their relative positions within it or left and joined the other room." [3]

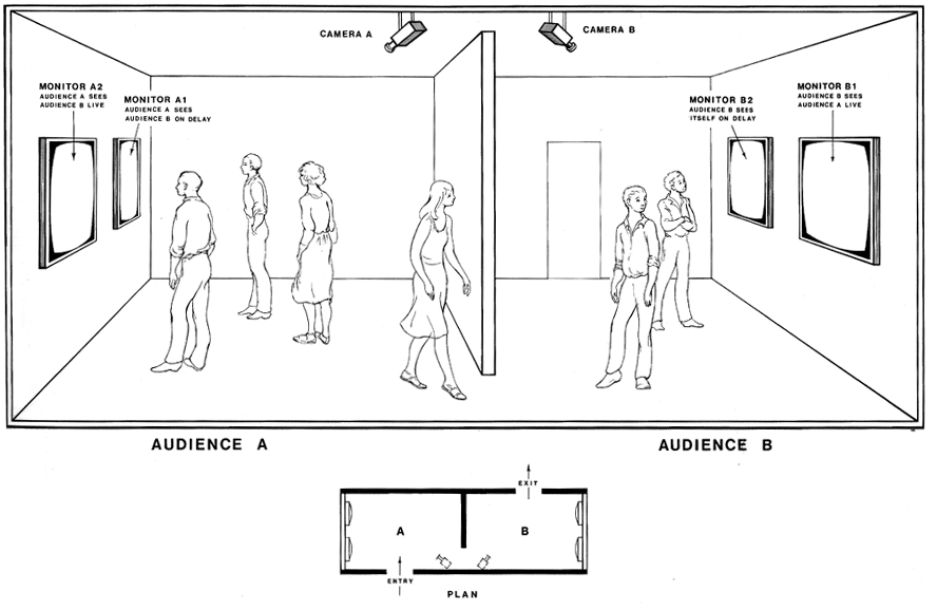


Figure G.1 [2]

Involved in Time Delay Room 1 are several complex situations of perceptual confusion, visual feedback, and multiplicity. The 8-second delayed video feed on monitors A1 and B2 is the source of complexity. The measurement of 8-seconds is significant as the limit of our short-term memory. The 8-second delay effects our immediate present perception.

Graham writes:

"If you see your behavior eight seconds ago presented on a video monitor «from outside» you will probably therefore not recognize the distance in time but tend to identify your current perception and current behavior with the state eight seconds earlier. Since this leads to inconsistent impressions which you then respond to, you get caught up in a feedback loop. You feel trapped in a state of observation, in which your self-observation is subject to some outside visible control." [3]

[2] Dan Graham, diagram for Time Delay Room 1, 1974

The delay gives viewers the opportunity to see themselves in both spaces at once: If a person walks from room B into room A, there is the potential to look at monitor A1 and see oneself still in the previous room. When watching the delayed representation of one's self, the direct, self-conscious connection to the image is lost and the image is removed from the observer. Even while acknowledging that the image is (was) the observer, he will exist as another form of observed representation. Rooms A and B are shared and experienced as a whole unit in time, additionally the space is doubled, each room existing in both a present state and a delayed state.

The perceptual effect of the 8-second delay in monitor A1 correlates to that caused by the ½ $\overline{BY}$ variable in the *Figure T.3* situation: this allows for a Dialectic Volume. The delayed image on the monitor makes multiplicity possible; the variable that 'inhibits' function of perception (immediate short term memory) expands perceptual possibilities, in Graham's time-delay room, expands the perceived spatial limits.

Complications in figure T.3:

As tent B is erected and 'fills' tent A, the space between the two tent skins becomes a smaller volume, a more compressed space. While ones body is between tents (as they are being assembled) this space is particularly present and dense with activity, however once the body slips into the fully erected tent B, and out from between tents, the surfaces of the two tent skins meet and the space approaches the theoretical "infinitesimal" volume. This is perceived as another quality of space, or a nonspace. There is a dualistic distinction between the ways that this space is perceived. In *Figure T.3* the diagram shows the tent openings aligned, it does not specify, however, the variations based on the opening of

tent B: as open (unzipped) during assemblage vs. closed (zipped) during assemblage. When tent B is open during assemblage, not much contact must be made with the space, one could enter tent B as soon as it becomes a more comfortable volume than that in tent A. {When *Figure T.3* was first performed, this variable was admittedly unconsidered and tent B was left unzipped. This less-expansive, less-compressive model was found that more closely describes a replaced volume, and does not reach the most 'expansive' potential.} By re-performing the model with a closed tent B, the model is experienced to full potential and efficient doubling is observed.

Figure T.4:

While the first experiment was more than sufficient to demonstrate and articulate the various perceptual and structural forces at work, *Figure T.4* is a more specific model developed to eliminate the potential confusion in the first experiment and to better maintain the effect of a dialectic volume. By reversing the orientation of tent B, the compressed space between tents must not only be confronted (as it was in *Figure T.3*) but navigated. The performer must observe the filling of the tent A volume, experience the legitimate flexible-volume of the 'filled' tent A, travel within that space to the entrance of tent B, and then enter and re-perceive the space as contained by tent B.

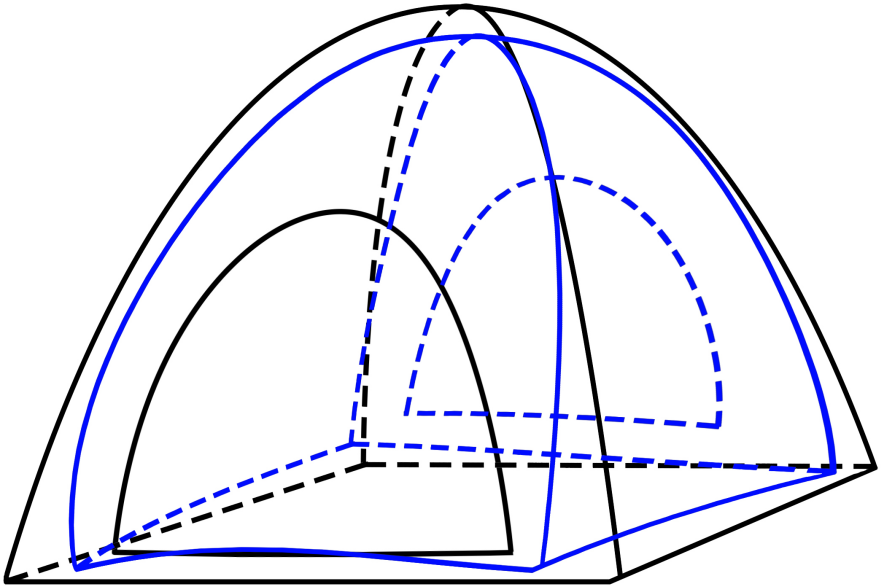


Figure T.4

The starting point structure is the original *Figure T.1* tent; an identical tent in the opposite facing orientation: *Figure T.1 (back view)* is pitched within. Resulting in a complication and reorientation of the nested structure.

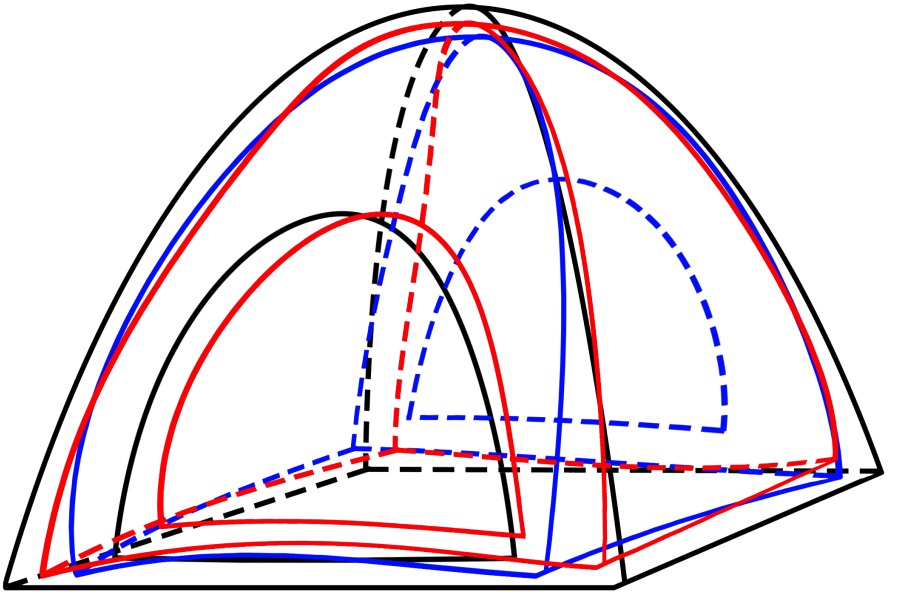


Figure T.5

Combined actions of *Figures T.3* and *T.4*

Reference:

The video *Nonspace (between two nested tents)* [4], not specific to any particular model, is documentation of navigating the nonspace passage present in all of the tent models and which is required by *Figure T.4* to gain access to tent B.

Figure T.5

The expansive possibility of nesting tents and in the reversal of tents (to maximize nonspace passage) brings up the question of the possibility to nest more than two tents. *Figure T.5* proposes a third tent within tent B: would this make for a perceived tripling of space or an experience more than doubling? If tents could be repeatedly nested, 3, 4, 5, 6,... within each other when would the specific structure of the tent fail to allow further nesting?

Through further nesting and maximizing the nonspace passage, *Figures T.4* and *T.5* create volumes with progressively higher densities. When I have used the term "multiplicity," remember that the perceived multiplicity is happening within the defined volume of the original 4' x 6' tent and the perceived doubling of space is a doubling of density.

[4] Harrison Tyler, 2012
http://youtu.be/gf845aDVHvo

sophiajacob Pt. I:
Constellation

Figure D.1[5]

The camera is a nonspace representing some outer space - it is effectively perceived as a non-dimensional point, a point of view. While the camera is in effect, a non-dimensional point, the viewer stands within that point as if it were some volume, a versatile volume that exists in any space. There is an empathetic positioning of seeing through the camera's sight that is the ultimate compressive situation of existing within or behind a non-dimensional point. This single point documents and represents a moving image of some outer volume; that which is relative to the older phenomenon of a 2-dimensional plane (drawing) describing a volume through graphical perspective (*Figure D.1*).

[5] Albrecht Dürer, *Artist Drawing a Nude with Perspective Device*, from: The Painter's Manual, 1525

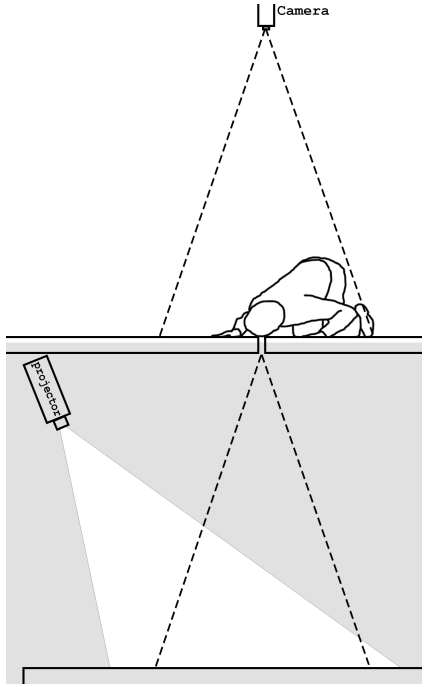
```
// CONSTELLATION
// program for arduino

#include <Servo.h>

Servo myservo;                    // tilt servo
Servo myservo2;                   // pan servo

int pos = 0;                       // variable to store the servo position
int pos2 = 0;
int rpos1 = random (5, 175);      // variables to generate a randomized coordinate-
int rpos2 = random (5, 175);      // to position the camera
int i = 0;
void setup()
{
  myservo.attach(5);              // attaches the servo to pin 5 - tilt servo
  myservo2.attach(9);             // attaches the servo to pin 9 - pan servo
  pinMode(13, OUTPUT);
}



                                  // function to position the servos and camera-laser-
                                  // mechanism at a randomized coordinate; pause-
                                  // for a randomized duration; activate laser for-
                                  // randomized duration; deactivate laser; repeat;
void loop()
{
   for (int i = 0; i <= random(5, 15); i++){
    analogWrite(1, i);
    delay(10);
    myservo.write(random (0, 100));
    myservo2.write(random (5, 170));
    delay(500);
    digitalWrite(13, LOW);   // set the LED on
    delay(random(10, 3000));
    digitalWrite(13, HIGH);   // set the LED on
    delay(100);
    Serial.println  (i);

}
}
```

Figure C.1

Arduino Code for the sophiajacob Basement video: Constellation

The observer is the basement, the observer is the camera, the observer is the image, the observer is virtual, the observer is the observed.

sophiajacob Pt. II:
Surveillance Column



A ¾" hole is drilled in the plywood floor of the gallery so that the basement floor can be seen from above. A fixed-focus Surveillance camera is fixed to the ceiling of the gallery and pointed straight down at the floor of the room; the hole is centered in the video frame. The live video feed is projected through an LCD projector in the basement. The projected image of the live-feed video is positioned on a horizontal screen so that it fills the entire field of vision when looking through the hole in the floor at the projected image. A viewer looks through the hole in the floor to see him or herself as from the point of view of the camera. The basement space becomes a represented version of

the gallery space: the vertical limits of the space are extended becoming an endless tunnel of observation, or an endless column of represented spaces. The function and roles of the camera, projector, and viewer are perceived as similar and interchangeable, the cone of "sight" is the common element and allows the viewer to identify with the camera's position and sight range.

As one looks through the hole in the floor into the basement, whatever the actual space of the basement might be has been replaced by a virtual space. The existence of a basement is questioned; it is now an abstracted virtual space for simulation. What spatial-perceptual elements are at work for the spaces of the basement in relation to the ground-floor gallery? Perceived as abstracted, simulated spaces, a density relationship is not quite as definite or literal as in the tent models, but varied by the modes of perception being visual or physical/functional perception.

The surveillance loop causes an expansion of total perceived visual space repeating vertically within the physically defined bounds of the building. This makes for a compressive situation, one with expansive bounds: a spatial-perceptual situation of a higher density. In terms of physically perceived functional space the scenario appears a fairly barren landscape-- the visual stimuli exist mostly in the basement and allow for a very minimal volume of actual physical interaction. This limiting of functional perception is a boundary with the expansive property that extends visual and non-physical perception. The perceptual allowances created by situations with such "limitations" (the variable and definite structure in the tent models and Dan Graham's 8-second delay) are spatially expansive, creating dense spatial-perceptual volumes: Dialectic volumes.

[1] Huggett, Nick. “Zeno’s Paradoxes.” (Stanford Encyclopedia of Philosophy). Stanford, 15 Oct. 2010. Web. 26 Dec. 2012.

[2] Dan Graham, diagram for Time Delay Room 1, 1974

[3] Gregor Stemmrich, «Dan Graham,» in Thomas Y. Levin, Ursula Frohne, Peter Weibel (eds.), CTRL[SPACE]. Rhetorics of Surveillance from Bentham to Big Brother, ZKM | Center for Art and Media, Karlsruhe, 2001, The MIT Press, Cambridge, MA, London, 2002, p. 68.

[4] Harrison Tyler, 2012
http://youtu.be/gf845aDVHvo

[5] Albrecht Dürer, Artist Drawing a Nude with Perspective Device, from: The Painter’s Manual, 1525
http://employees.oneonta.edu/farberas/arth/arth200/durer_artistdrawing-nude.html

Thank you Val for design & production.
Thank you Isabella for immense support, expansive dialogue & editing.