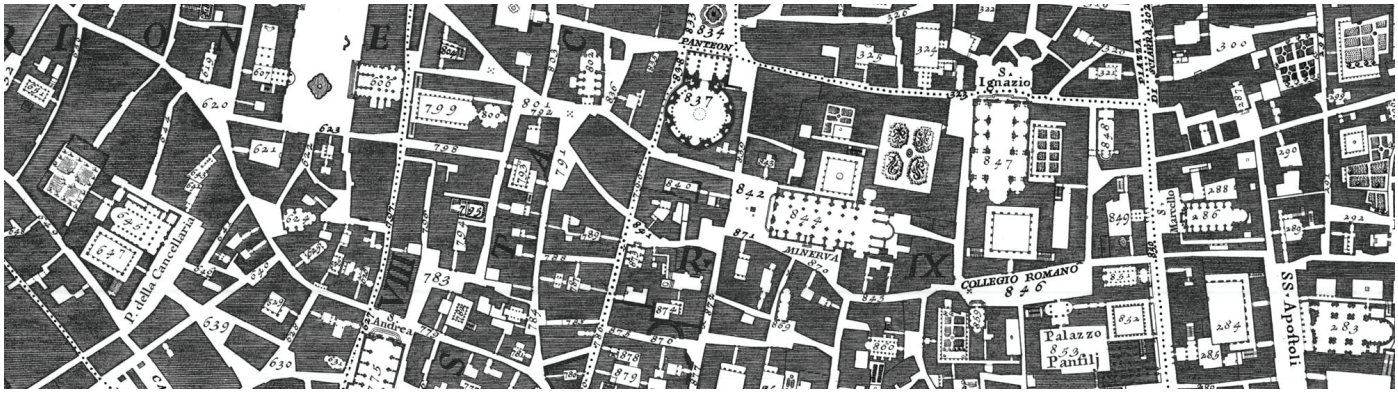
DRAFT

Interactive Cubes

A study of mass and space



Giambattista Nolli's 1748 Map of Rome | Detail

MASS
noun
1. a quantity or aggregate of matter usually of considerable size
2.(1): expanse, bulk
(2): massive quality or effect
(3): the main part or body
(4): aggregate, whole

SPACE
noun
1. a boundless three-dimensional extent in which objects and events occur and have relative position and direction
2. physical space independent of what occupies it
3. a limited extent in one, two, or three dimensions : distance, area, volume

FIGURE / GROUND
noun
1. relating to or being the relationships between the parts of a perceptual field which is perceived as divided into a part consisting of figures having form and standing out from the part comprising the background and being relatively formless

Introductory text here about drawings and models, mass and space, figures and grounds. Paragraph about Nolli plan of Rome and its spin-offs. Paragraphs about what students will do.

To begin with, set up your desk. (link to video?)

For this project, you are asked to work both individually and collaboratively, to study the relationship between mass and space, by manipulating blocks via models and drawings. There should be a focus on the spatial quality and figure/ground relationship of the models and drawings.(maybe also why?????)

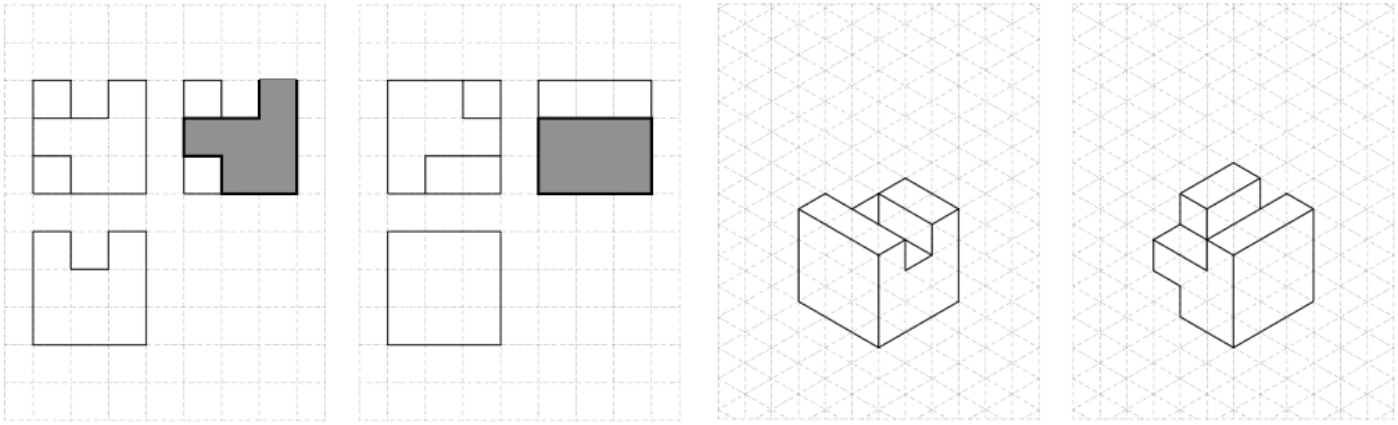
Concept Timeline:
Unit -> Chunk -> Conglomerate

Project Objectives

Students will demonstrate that they can:
- Understand the context of figure/ground drawings & diagrams
- Construct orthographic drawings (plan, section, axonometric) using architectural lineweight and linetype conventions
- Use construction geometry to relate ideas across multiple drawings
- Develop iterative model making habits
- Become familiar with compositional terms and ordering systems
- Develop graphic and verbal communication skills through group coordination

Schedule

M	9/14	Intro to Project 01. Intro to studio space setup and Part 1.
W	9/16	2 models and 1 set of drawings on grid due, intro to Part 2. Form groups of two/three.
R	9/17	Groups of two discuss iterations and spatial qualities.
F	9/18	Modified models and draft drawings on grid due.
M	9/21	Final drawing set due. Concept Board setup and review in class. Intro to Part 3. Form groups of four/five.
W	9/23	Review modified drawings with iterations in groups.
R	9/24	Working on final drawings.
F	9/25	Final drawing sets due.



exaplanary drawings with elevations, sections, and axons on 8.5*11 paper

Part 0 | Set Up Your "Studio Space"

• The acts of drawing and model-making require a consistant environment with ample space, comfortable seating, a flat surface, and more. A well-thought-out studio space is important, and can aid your creative process.

AXONOMETRIC
adj.
1. being or prepared by the projection of objects on the drawing surface so that they appear inclined with three sides showing and with horizontal and vertical distances drawn to scale but diagonal and curved lines distorted

ELEVATION
noun
1. a geometrical drawing that depicts one vertical plane of an object or structure

SECTION
noun
1. the profile of something as it would appear if cut through by an intersecting plane
2. the plane figure resulting from the cutting of a solid by a plane

PLAN
noun
1. a drawing of a building, town, area, vehicle, machine, etc. that only shows its shape from above, its size, and the position of important details

Part 1 | UNIT: From model to drawing, from drawing to model

This first part of the project will acquaint you with orthographic drawing conventions and basic modelmaking skills. It is the first training for your spatial imagination by connecting model and drawing. It also prepares you to learn to communicate with a partner via models and drawings.

Everything you create will be in **1:1 scale**.

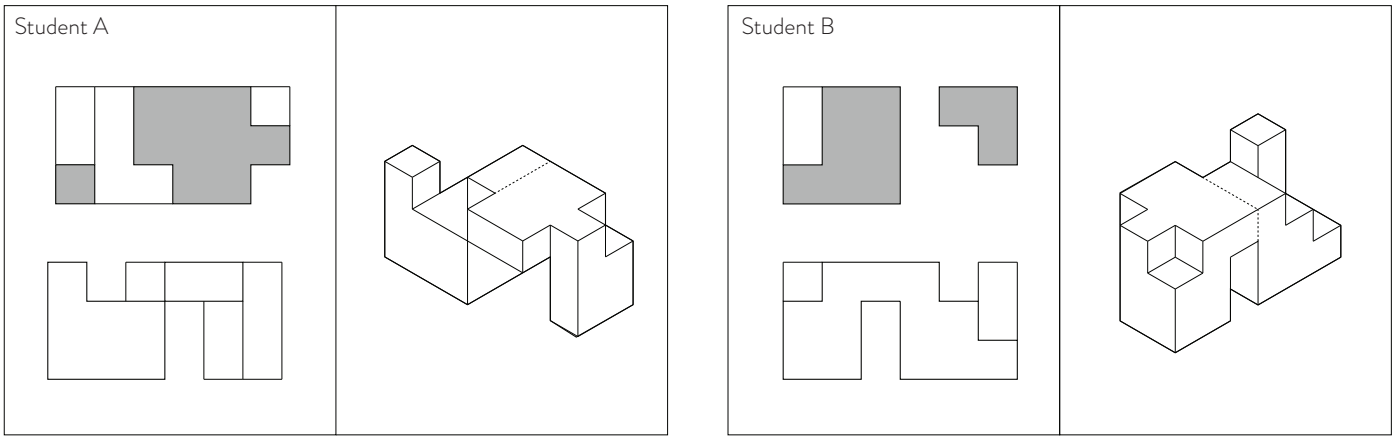
Pair of 2

• Each student is assigned **one unit** of 3" x 3" x 3" block, and a partner.
• Each student models both their own and their partner's unit, based on the instruction sheets given.
• Each student will draw orthographic drawings of **their own unit** on gridded letter-size paper.
* You will be given instructions on drawing the grid template.

Group of 3

• Each student models their own and one of their partners' units.
• Make sure that each unit is modeled twice, once by the owner and once by one of the partners.
• Each student will draw orthographic drawings of **their own unit** on gridded letter-size paper.
* You will be given instructions on drawing the grid template.

Drawing Deliverables:
• Two axonmetric drawings with views of your choice
• Elevations of all four sides
• Two sections - one each from both directions that cut through the center of the unit
• One ground plan



exaplanary final drawing set (one plan + one long elevation + one axon for each student)

Part 2 | CHUNK: The sum of the parts

In this part of the project, you will **work with your partner(s) to develop a continuous shared space by modifying the assigned units**. This part of the project will introduce you to iterative model-making, further your understanding of spatial imagination and creation, and prepare you to use drawings to communicate design iterations with your peers.

Everything you create will be in **1:1 scale**.

Pair of 2 and Group of 3

- Each pair/group will pick an orientation and "tumble the shapes" over Zoom to pick a side to meet.
- During the iteration process, each group will create draft drawings and models.
- Once the design is finalized, each student will build a single model of the edited unit, and each group will create a set of final drawings.

Rules for unit modification and chunk making:

- Each block needs to maintain its bounding box of 3" x 3" x 3" block.
- Move/add/remove three 1" x 1" x 1" blocks within the bounding box.
- Considerations should be made to have two objects coming together **to define space** (see the Nolli plan).

Deliverables:

Friday (09/18)

- Each person creates two draft iterative models of their **edited unit**.
- Each person creates two sets of draft iterative drawings of **the chunk** with their edited unit on gridded letter-size paper.

* Group of 3 makes two draft chunk interations that combine their own edited unit with each of their partners'.

Monday (09/21)

- Each pair produces one final drawing set on letter-size paper without grid

* In a group of 3, two students produces one final drawing set for one chunk, and another student produces one half final drawing set for the other chunk.

- Each student creates one final bristol model of the chunk.

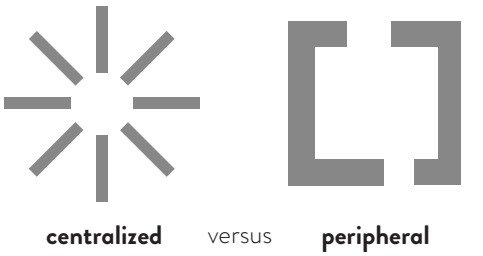
Part 3 | CONGLOMERATE : Spatial narrative

The last part of the project introduces some fundamental ordering systems. Using these systems, you will work in a group of 4 (two of the previous pairs combined) or in a group of 3 to created a continuous shared space that is defined by a given organization. This continuous space will be the scene of an event. Each group can pick and choose from the list of narratives provided, and expand the narrative based on the quality of designed space.

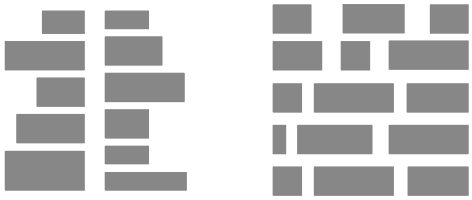
Different types of drawings in this part have **various scales**.

Step 1. Spatial Organizations

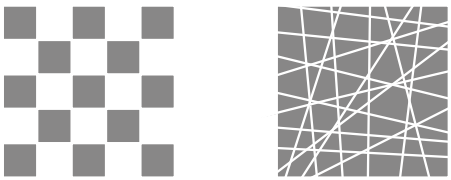
The group will arrange their chunks and determine what spatial organization exists already, in both configurations.



centralized versus **peripheral**



axial versus **distributed**

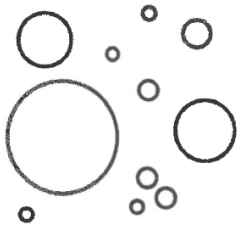


cellular versus **aggregate**

serial versus **unique**

Stan Allen "From Object to Field"

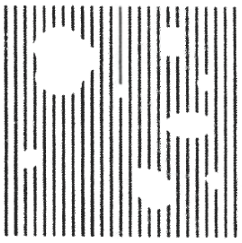

cluster


open cluster


loose grid


striated 2

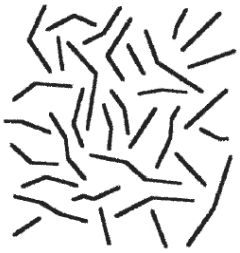

field vectors

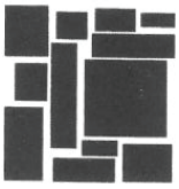

striated 3

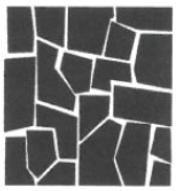

axial symmetry

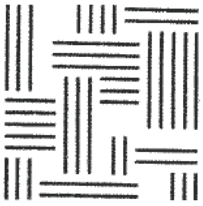

peripheral composition


field vectors


twigs


block composition


mosaic


patchwork


patchwork 2


linked assemblies


collision


striated


felt

Step 2. Elevation

• Two pairs within the group select one long elevation for each chunk to join.
• After receiving your group members' elevation, discuss why they did what they did, and how you can work together to unify your two sections of your conglomerate.
• Groups of 3 work collectively to select two chunks and long elevations to join, and work to unify your two sections of the conglomerate.

Rules for face condition mediation:

• Move/add/remove 0.5" x 1" x 1" blocks.
• Considerations should be made to unify the two chunks through these moves and to achieve the given spatial organization type.
• Elevation exploration drawings done on paper with a grid in a draft form in **1:1 scale**.
• Spartial condition exploration drawings done on paper with a grid in a draft form in **1:2 scale**.

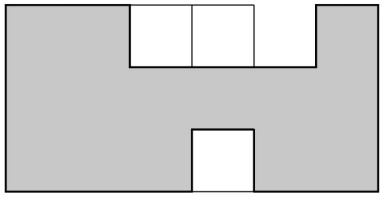
Deliverables:

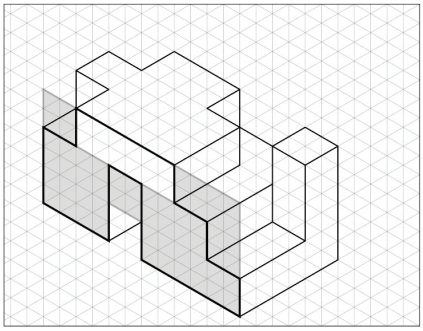
Wednesday (09/23)

• Exploratory draft drawings with existing face conditions for each chunk
• Draft sections exploring spatial condition for the conglomerate

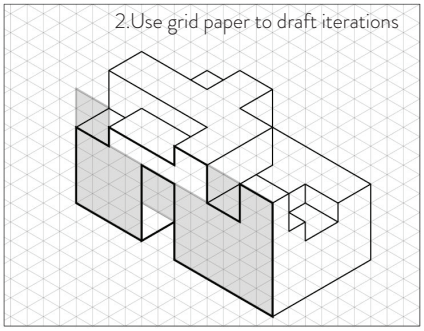
example for elevation exploration drawings on letter-size paper

1. received elevation

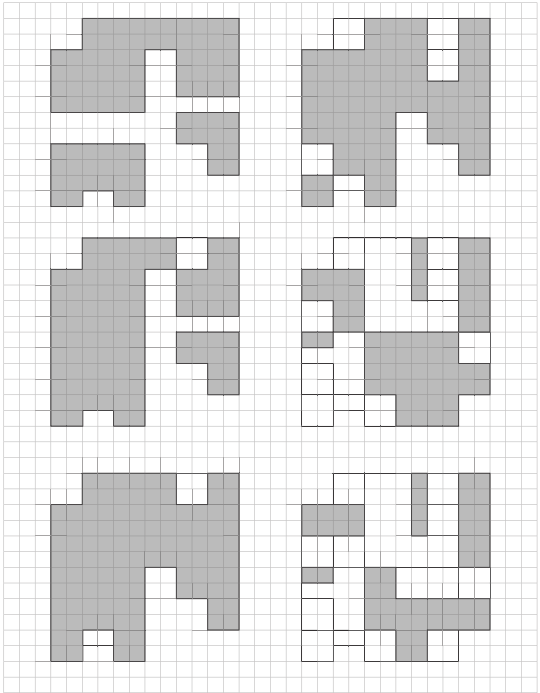


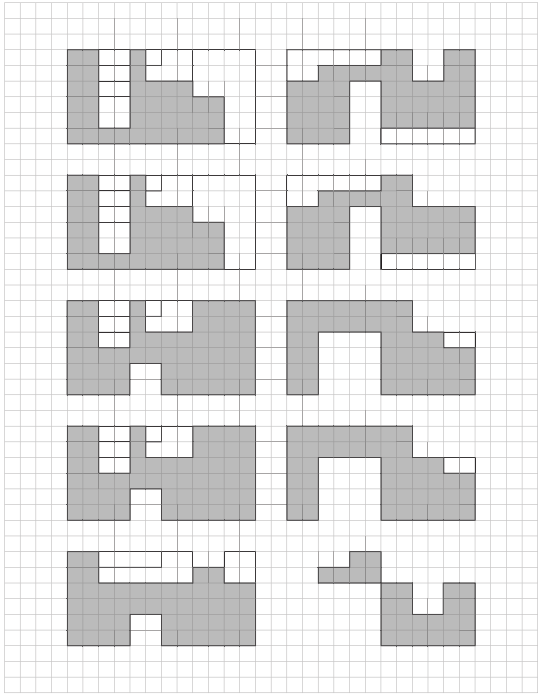


2.Use grid paper to draft iterations



example for spatial condition exploration drawings on letter-size paper





Step 3. Space with a story

Create a narrative via drawings:

- See following examples of *who* and *what* as the starting point for your narrative.

WHO:	WHAT:
Denis	are running away from each other
John and Cassie	are playing hide and seek
Ricky, Jasmine and Simone	is/are Parkouring
	is walking a dog
	is/are lost
	are arguing

- Develop the narrative more within the group with both verbal and graphic communication.
- Be sure to develope the narrative based on the existing spatial conditions of your conglomerate.
- Each member of the group will draw one section, one plan and one angle of the axonmetric view on one piece of bristol (19" x 24") **in 1:1 scale**.
- Place scale figures and other supporting elements to help accentuate the quality of the space and to tell a story.

Deliverables:

Friday (09/25)

- Final set of drawings with narrative