

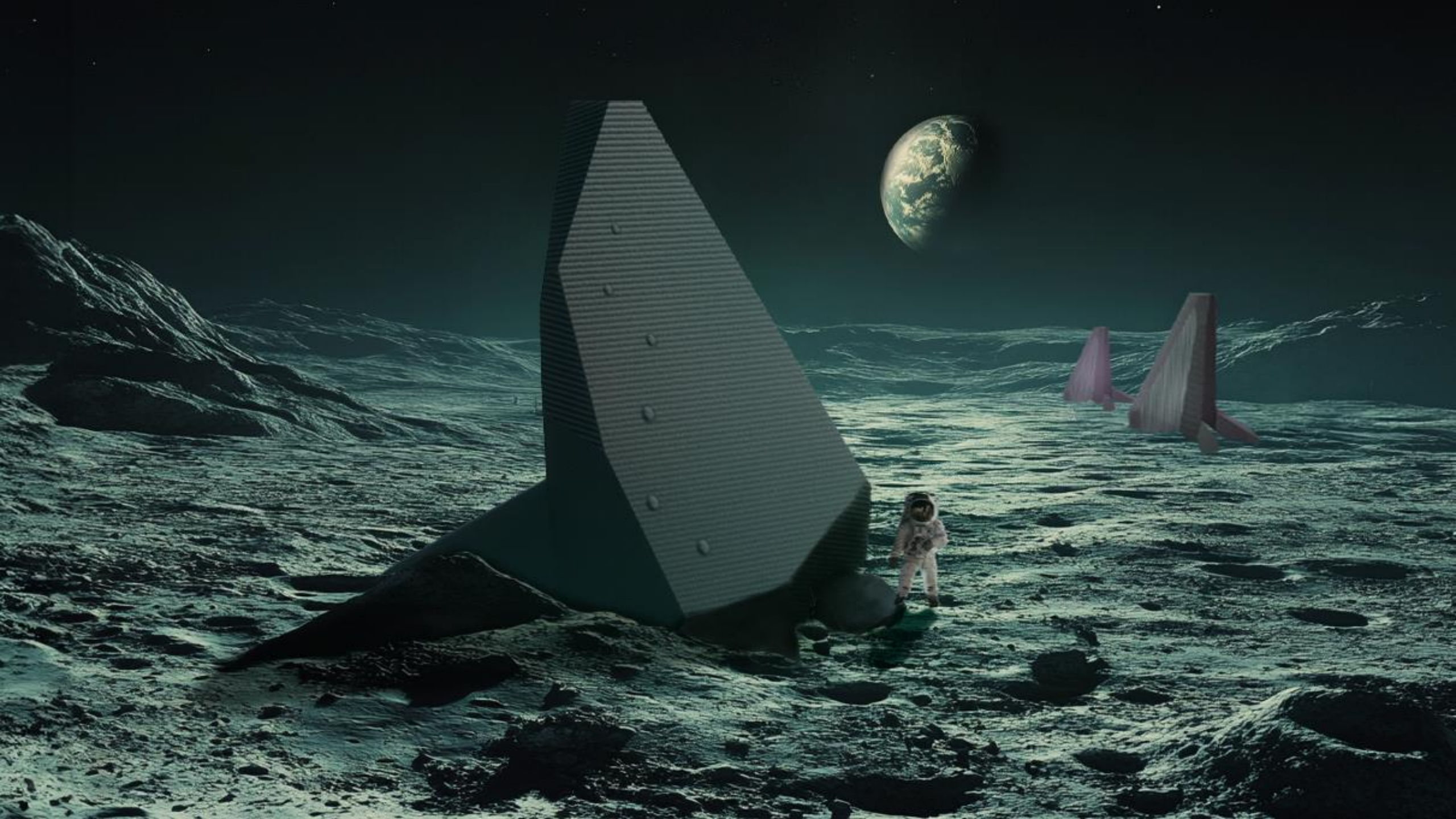
Vertical Moonbase

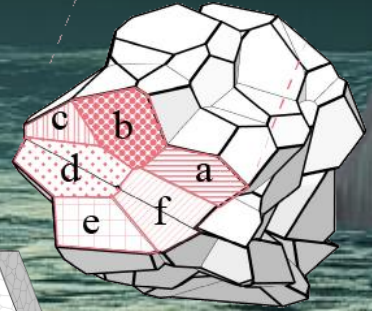
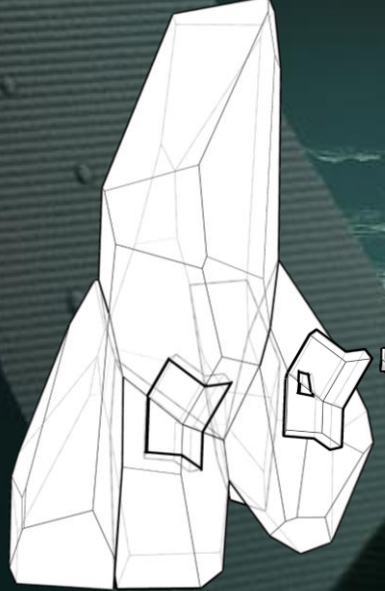
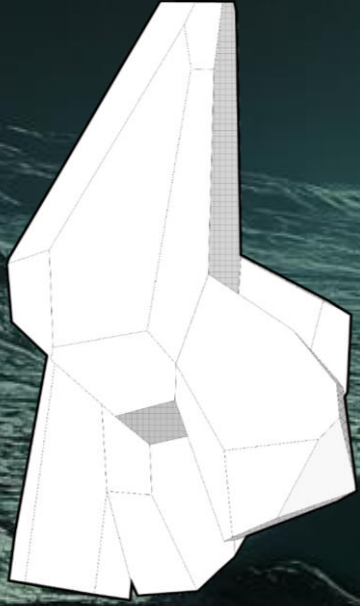
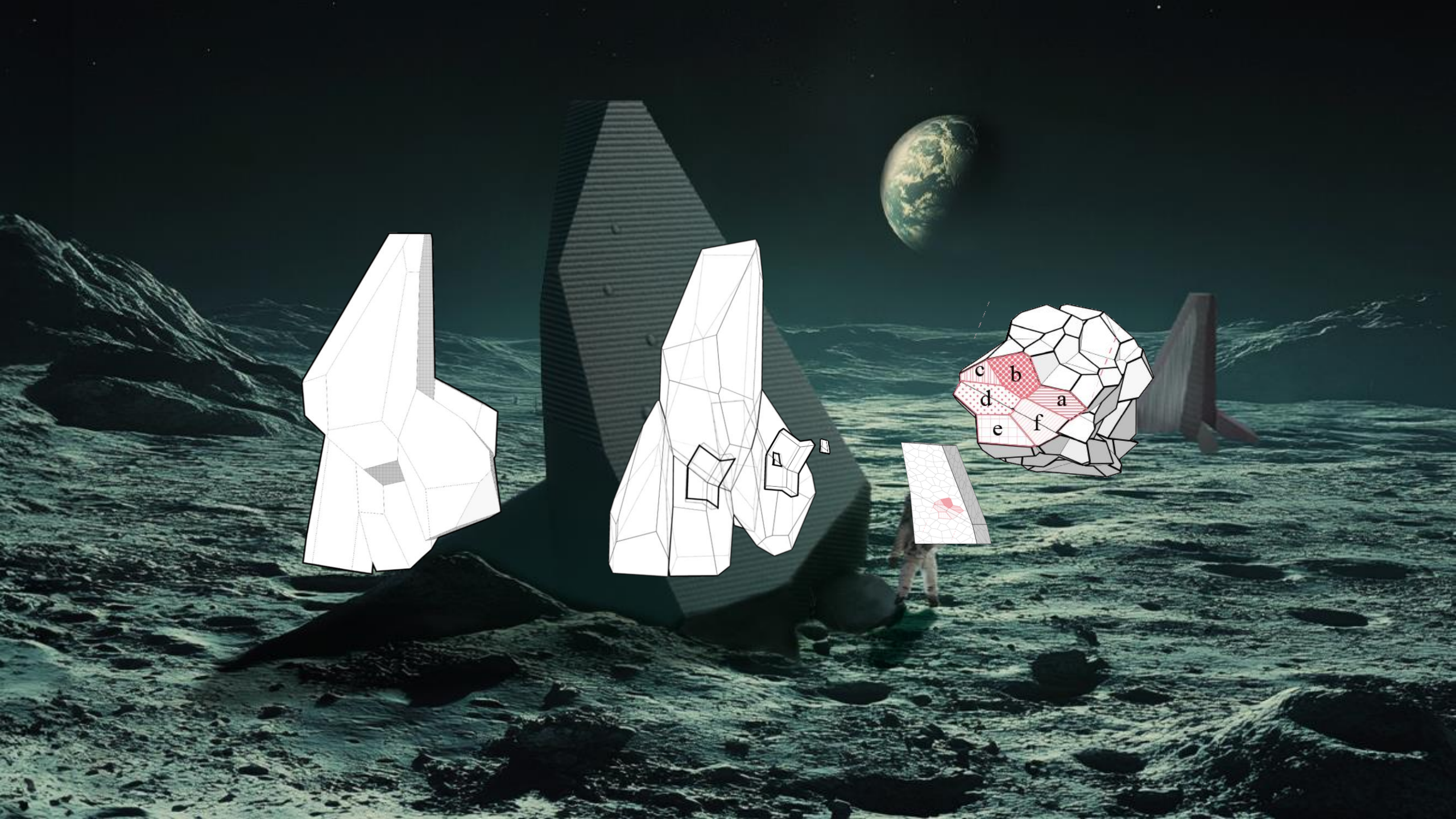
Vertical Living Habitats for Space Settlers

Workshop 1 Documentation

Jonathan & Walter

Tutor: Henriette Bier, TA: Arwin Hidding





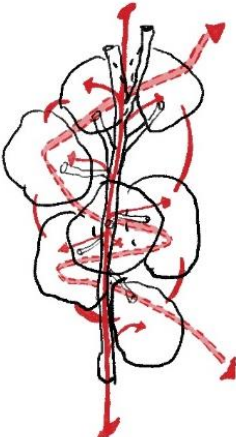
Form Logic



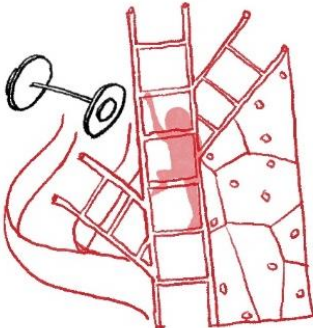
Vertical Structure



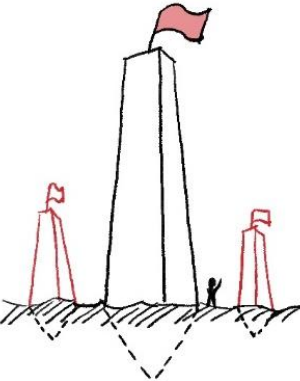
Micro Gravity



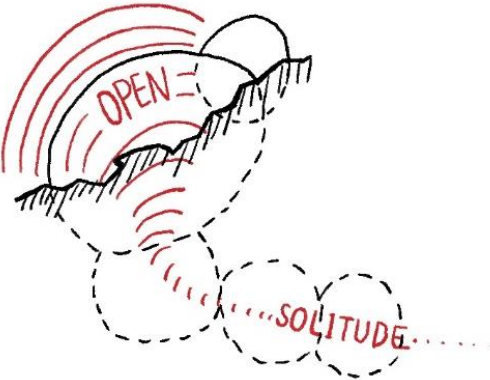
Central Core & Spiral Configuration



Physical Workout Optimization

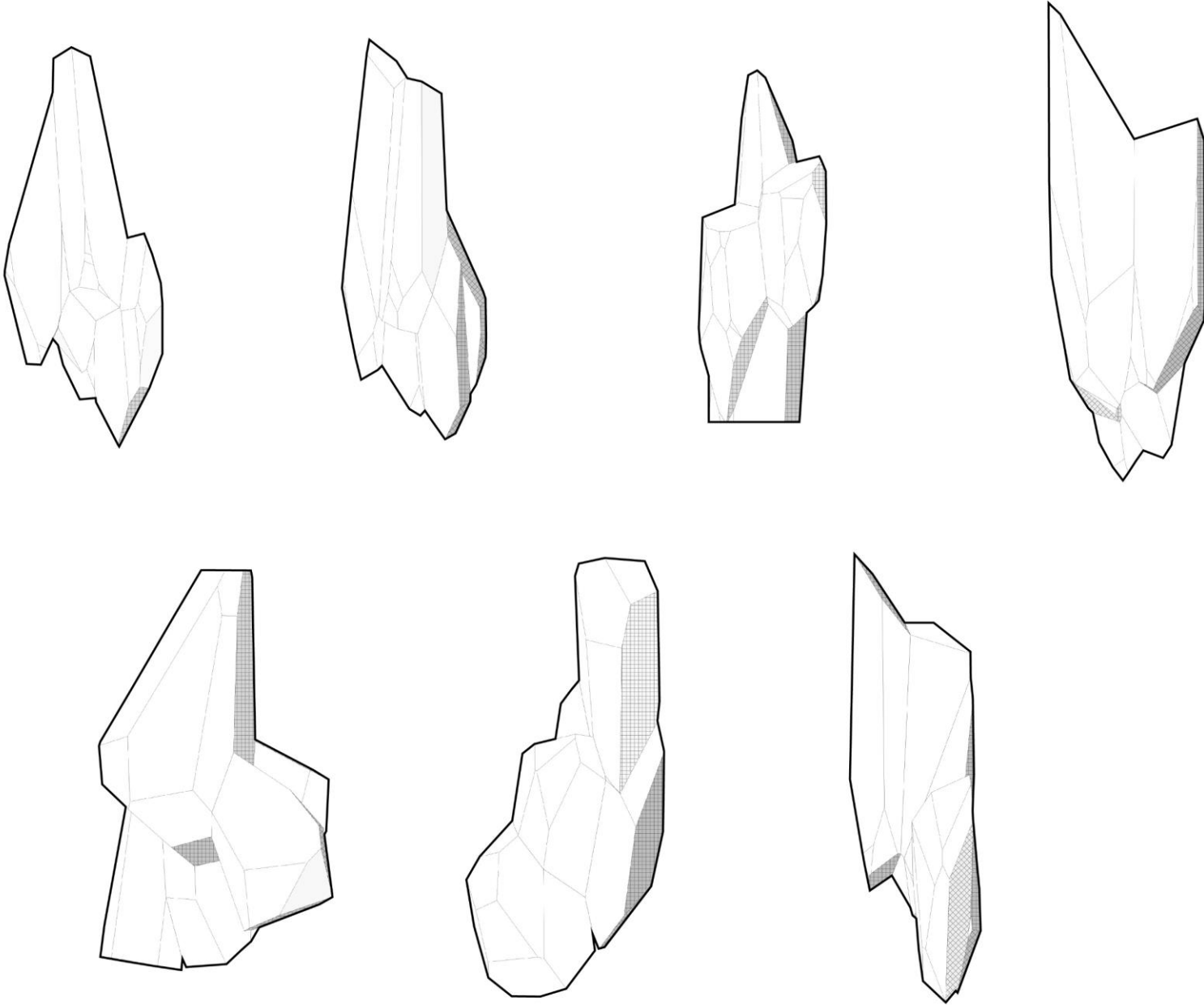


Monumentality of Humanity Presence

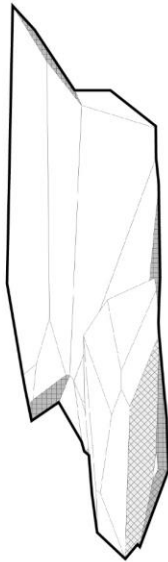
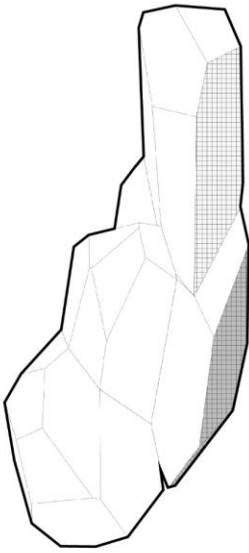
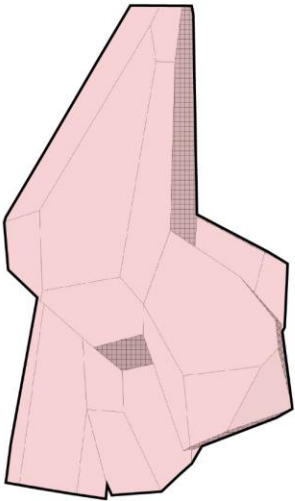
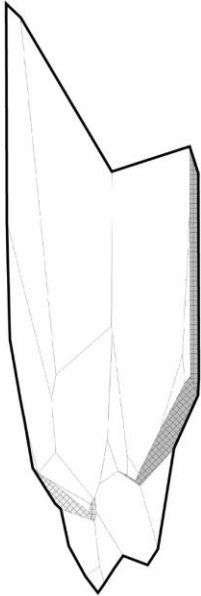
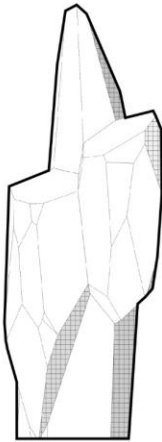
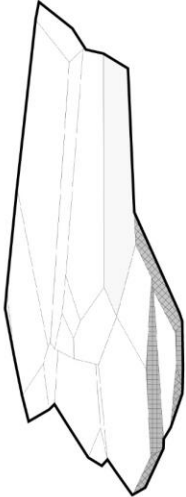
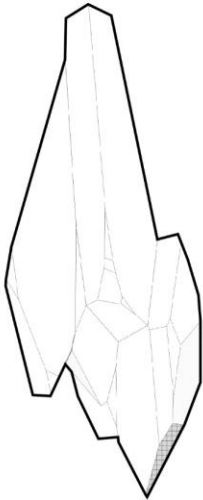


Levels = Privacy Degrees

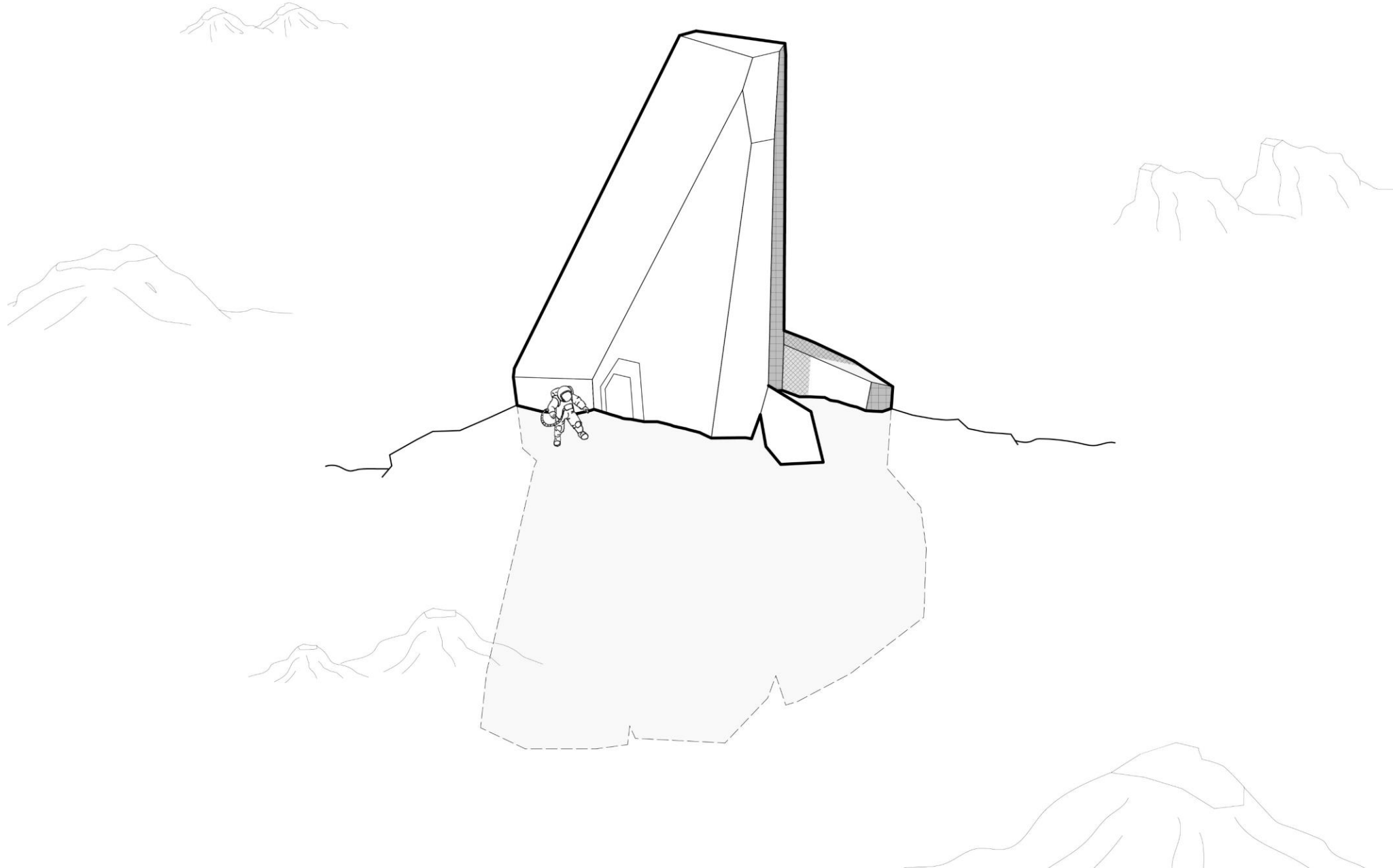
Overall Form Trials



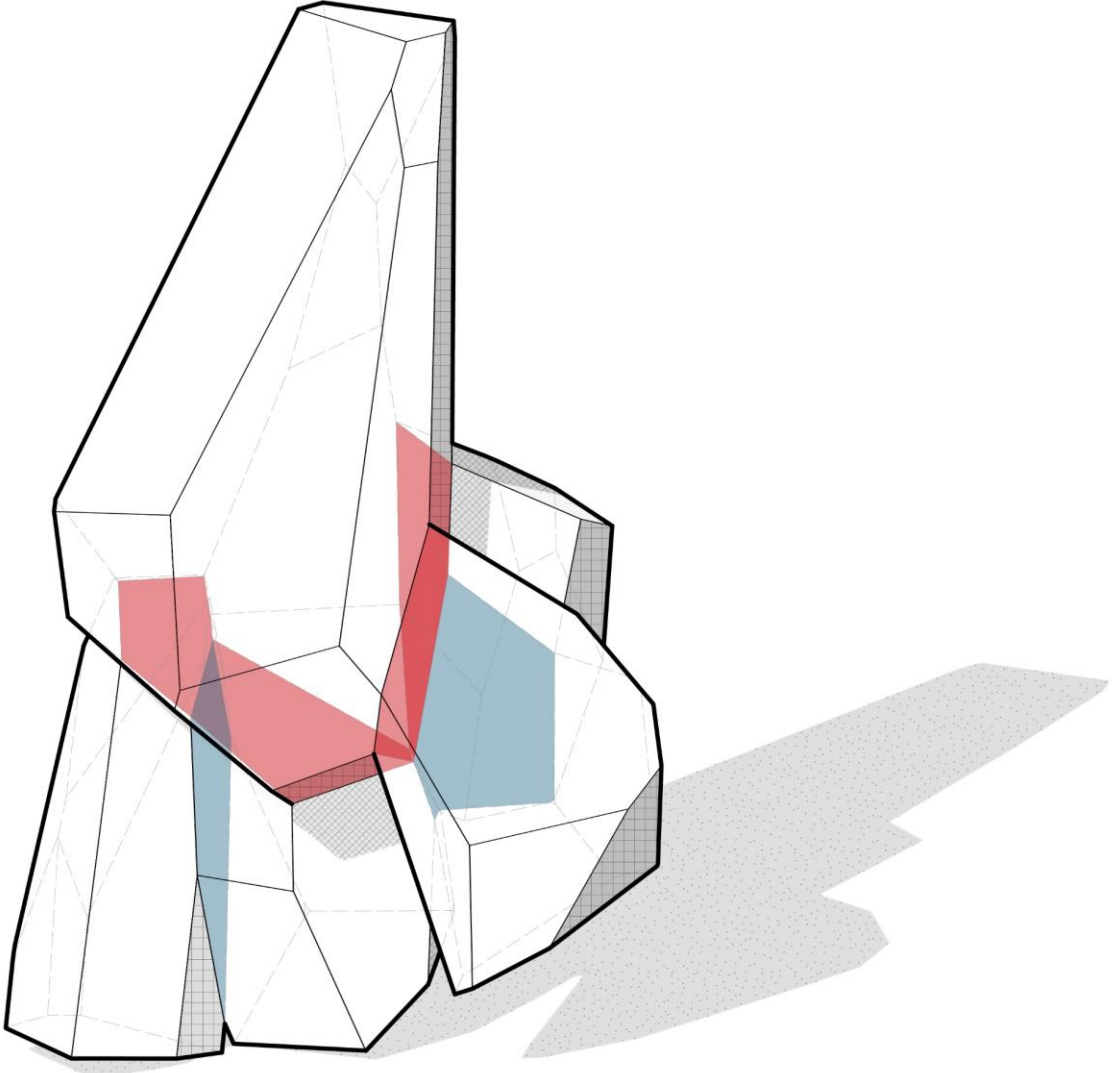
Overall Form Trials



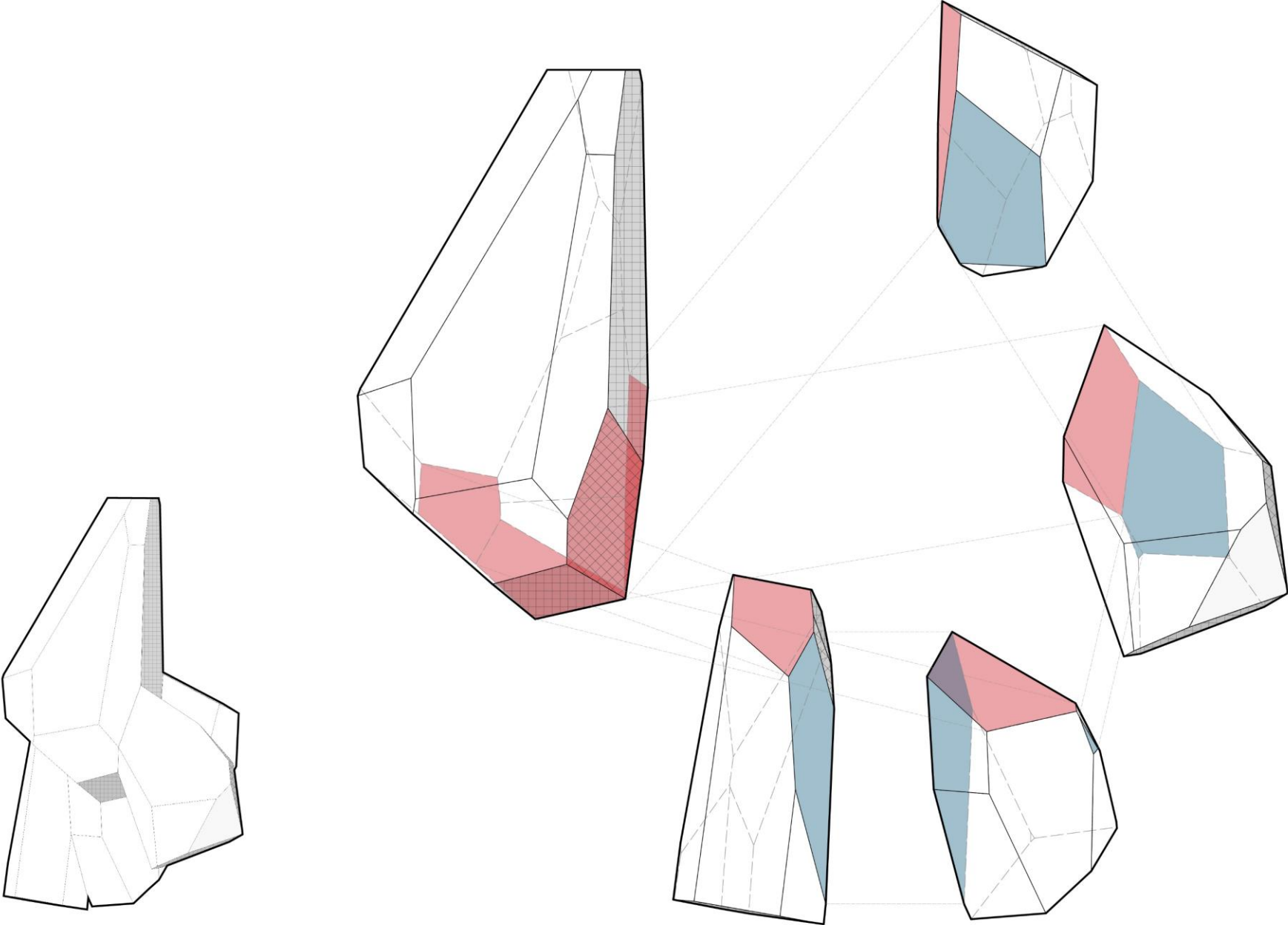
Building Tectonics



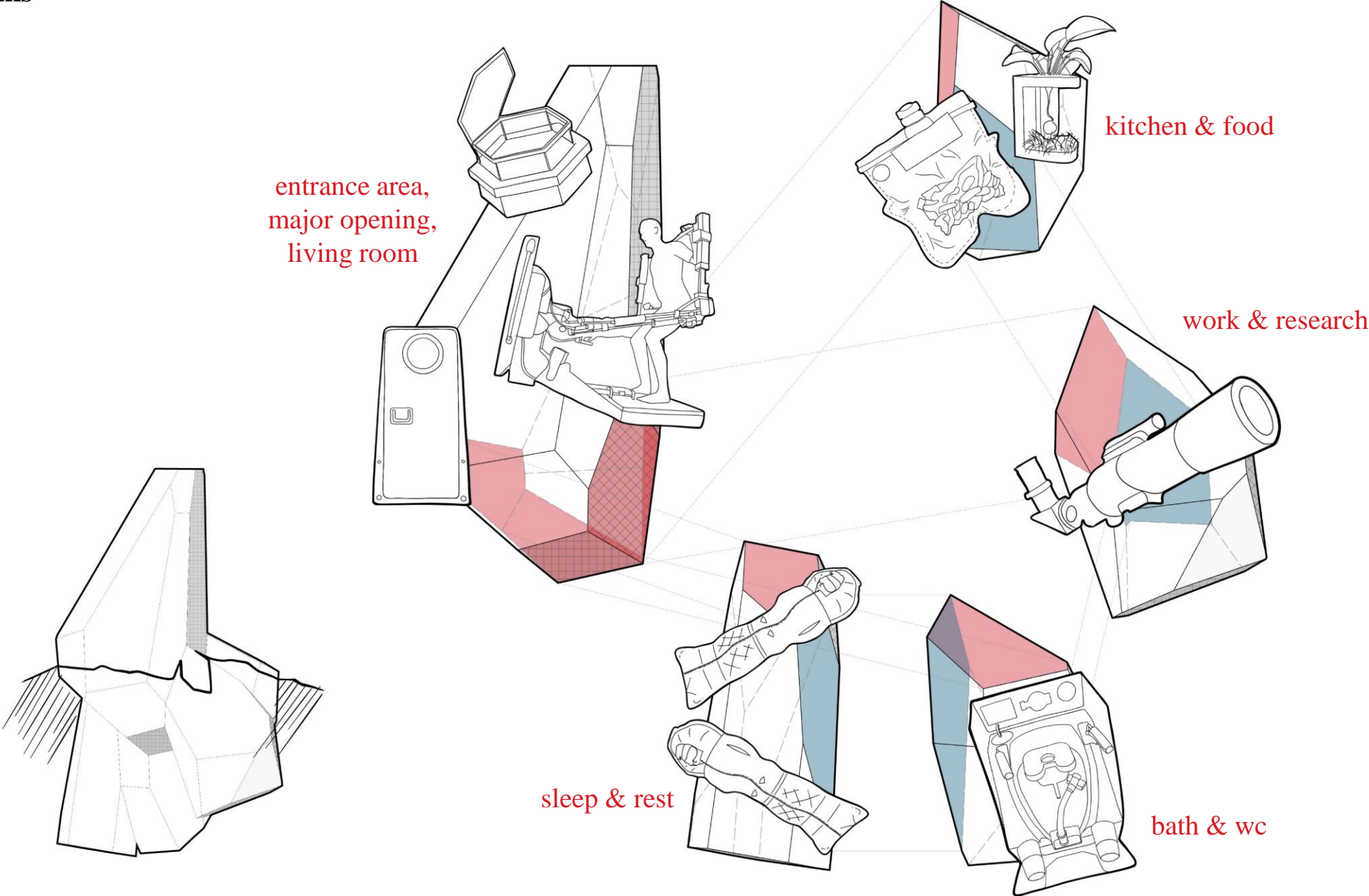
Spatial Programs



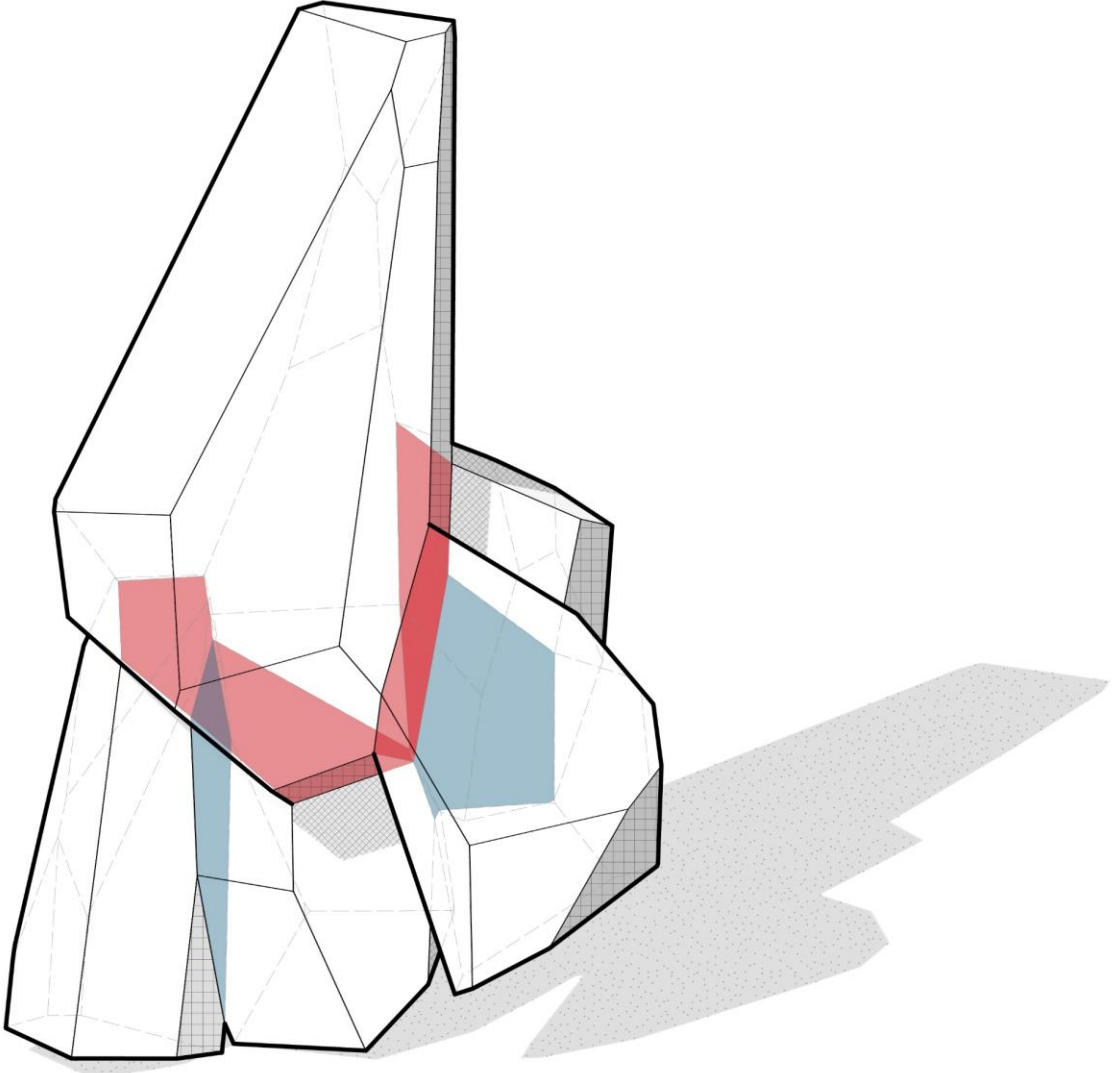
Spatial Programs



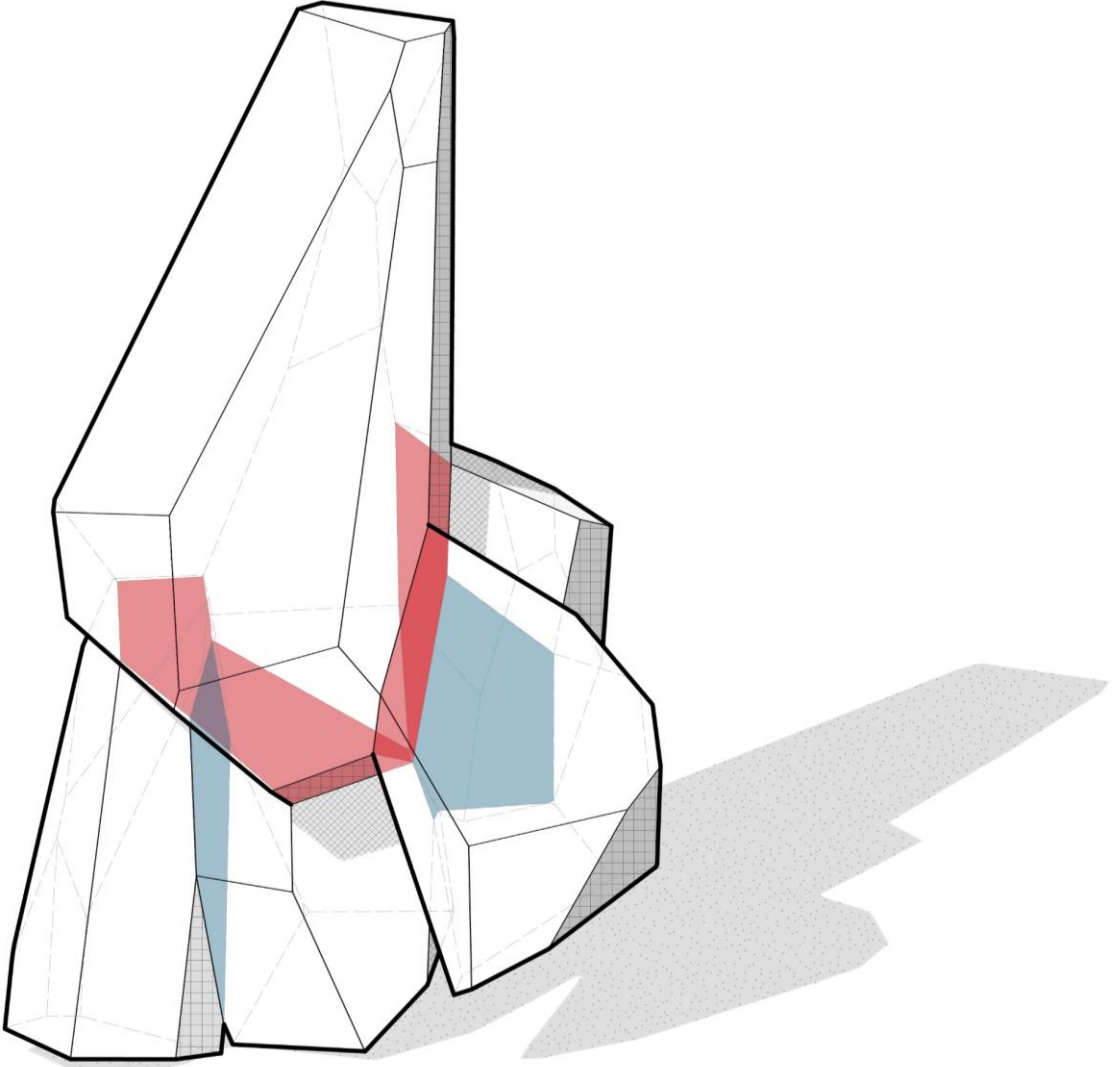
Spatial Programs



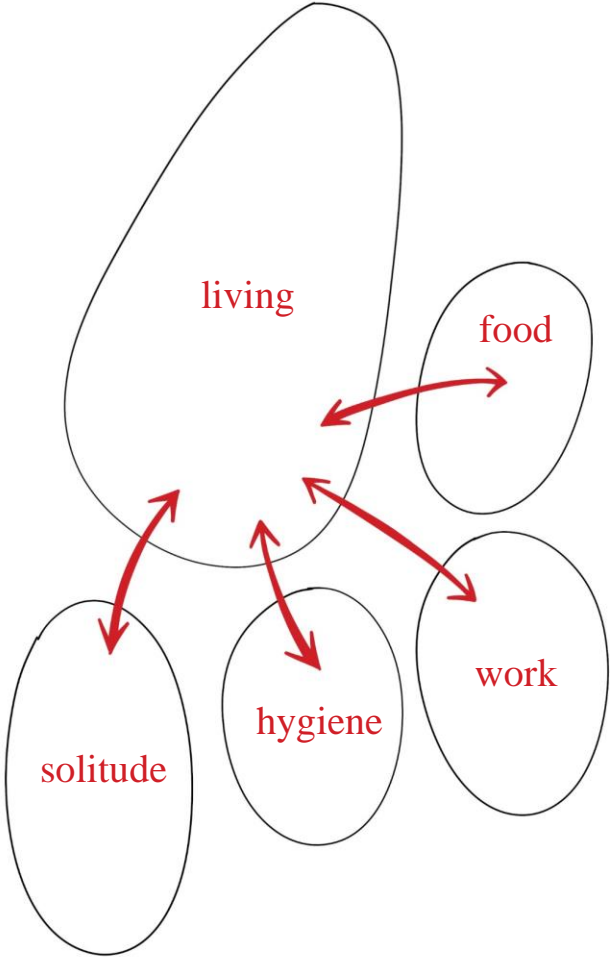
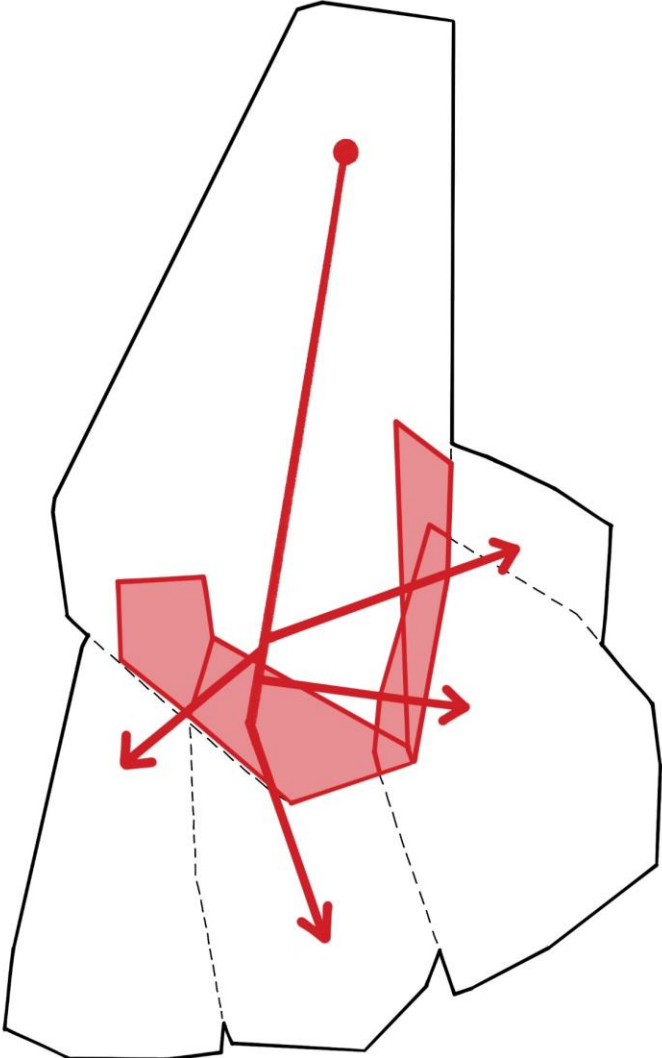
Spatial Connectivity



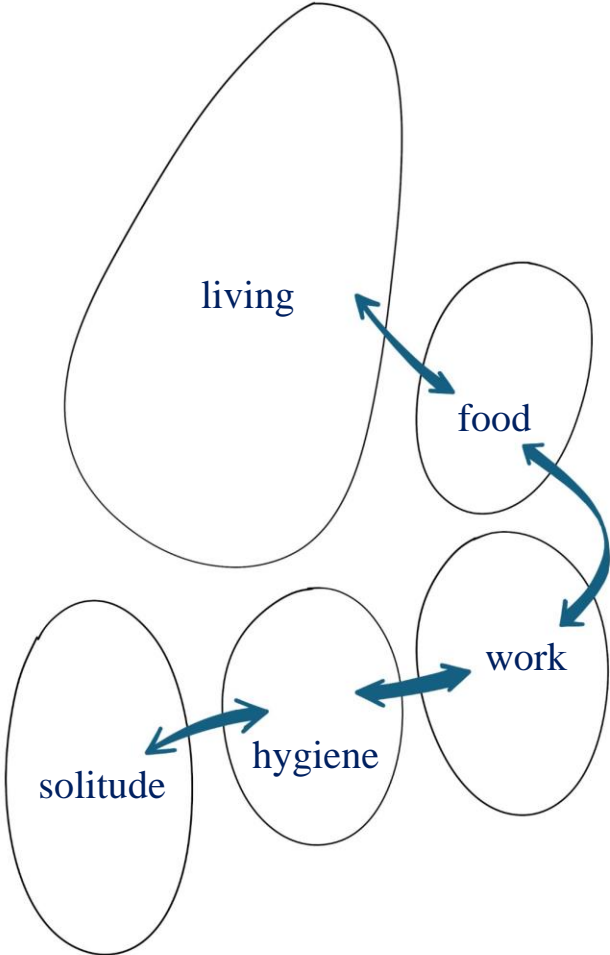
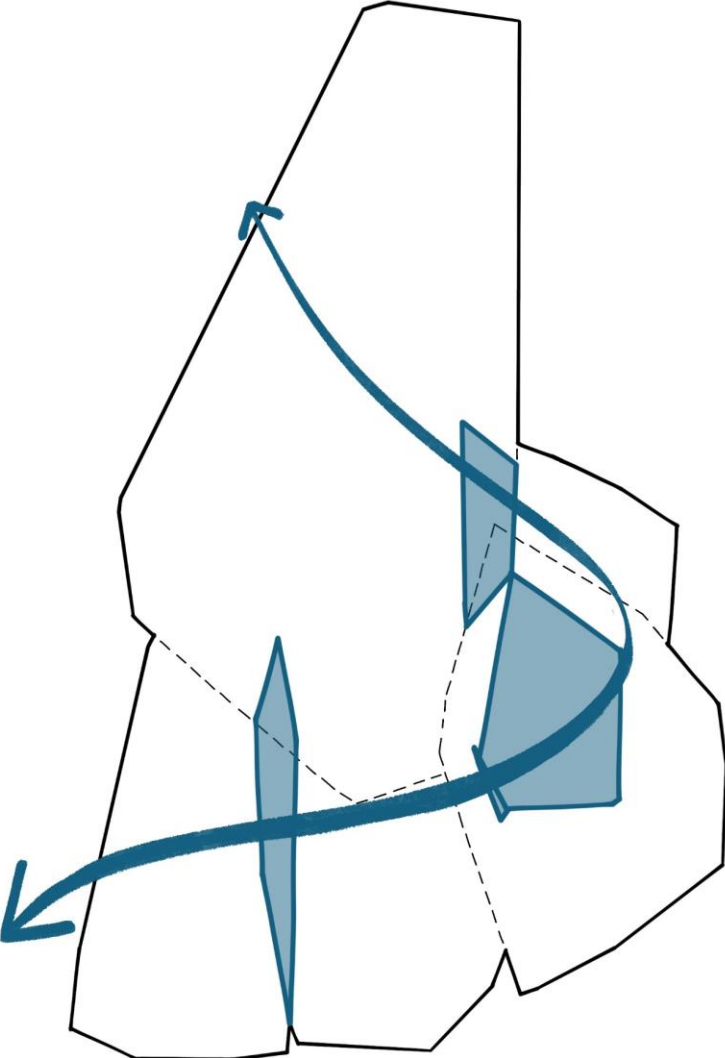
Spatial Connectivity



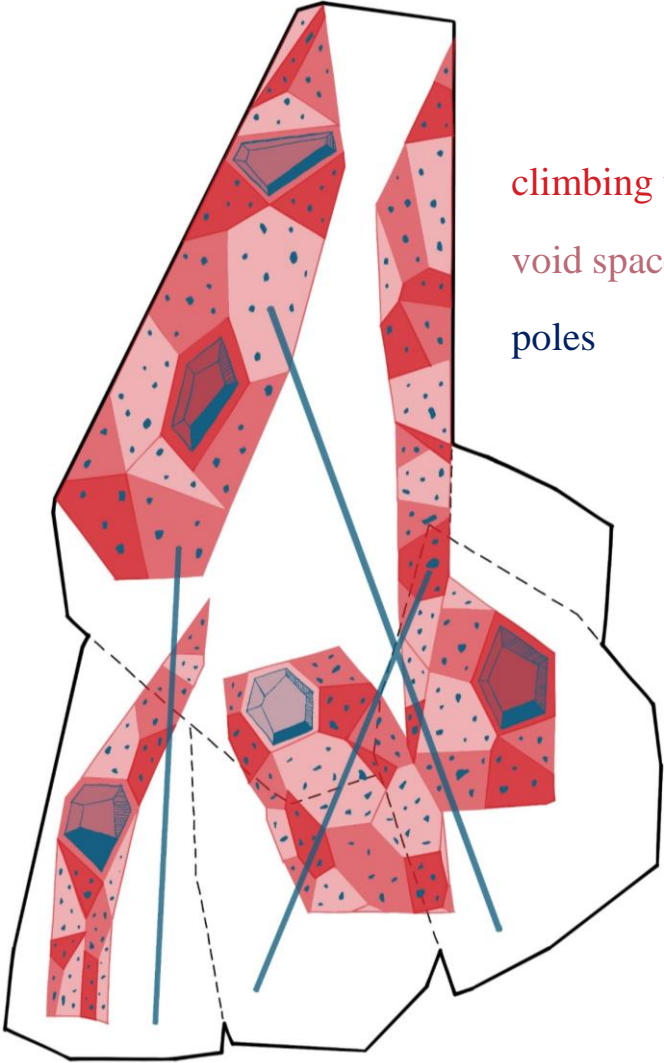
Spatial Connectivity



Spatial Connectivity



Spatial Connectivity

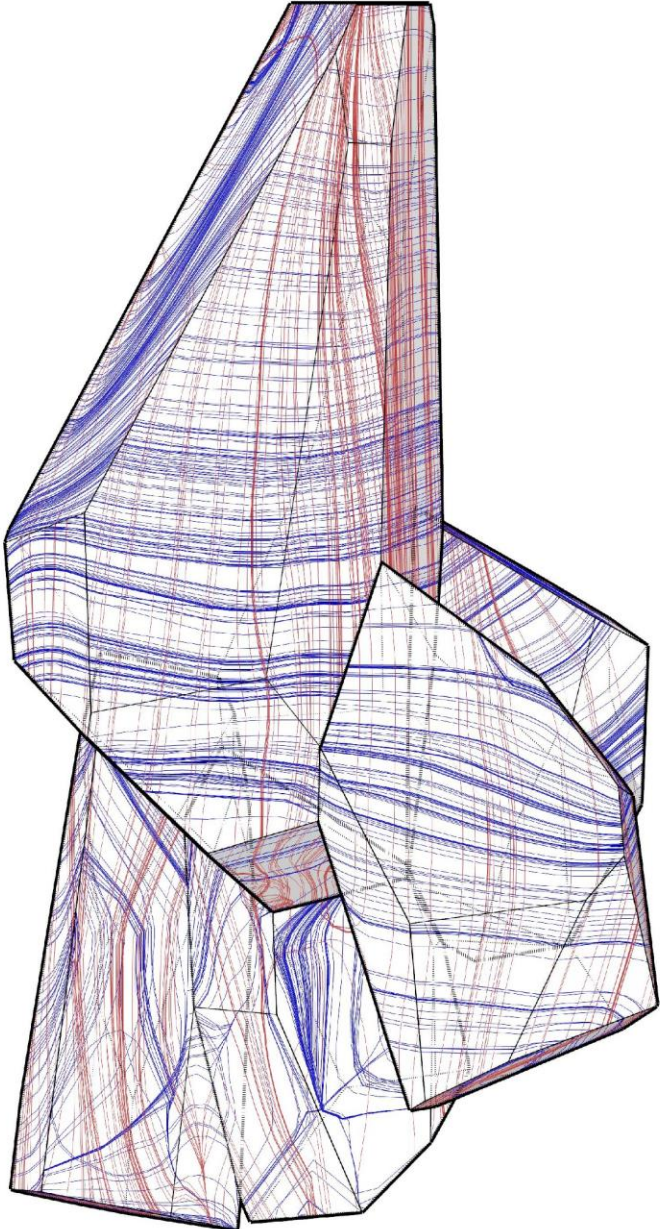


climbing walls

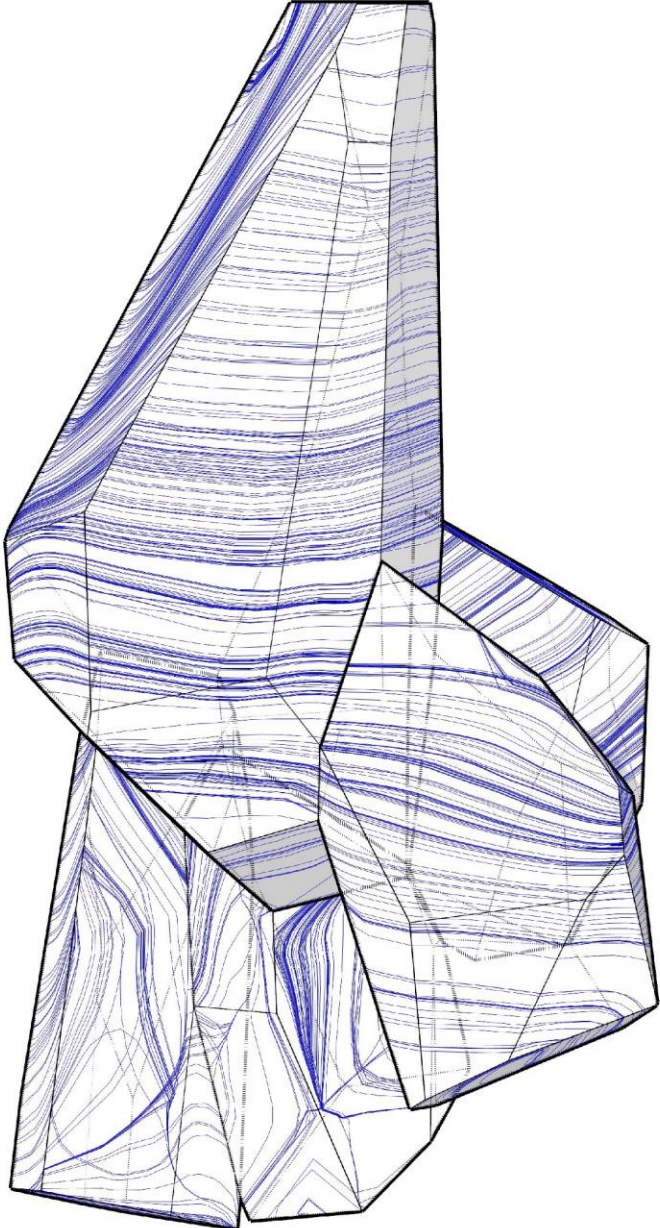
void spaces

poles

Stress Lines

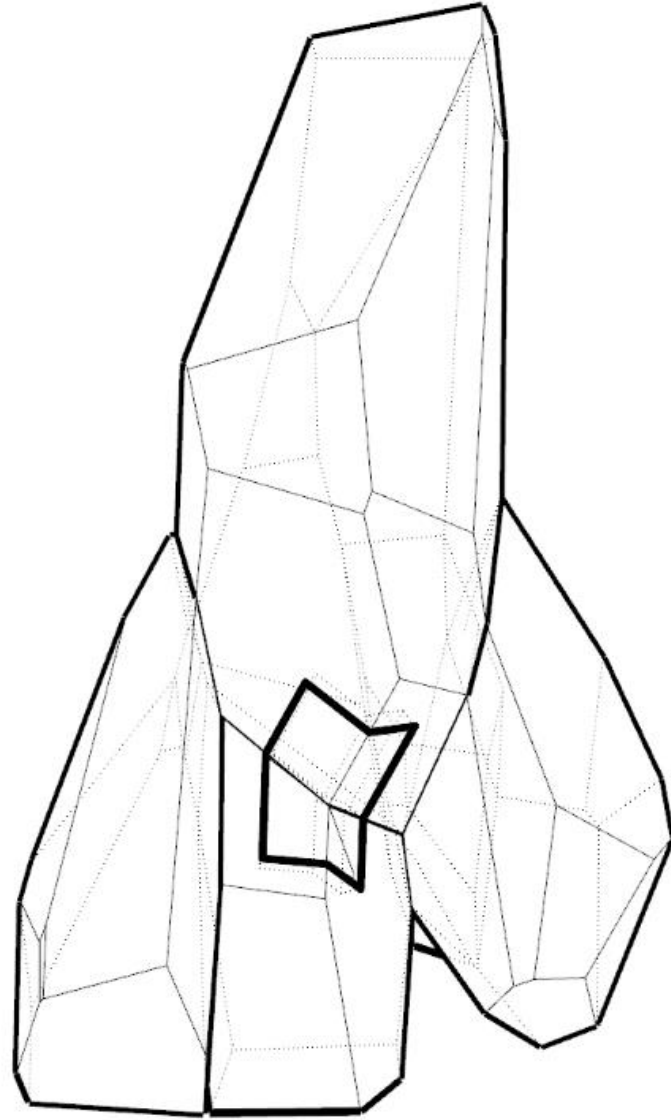


Tension Lines

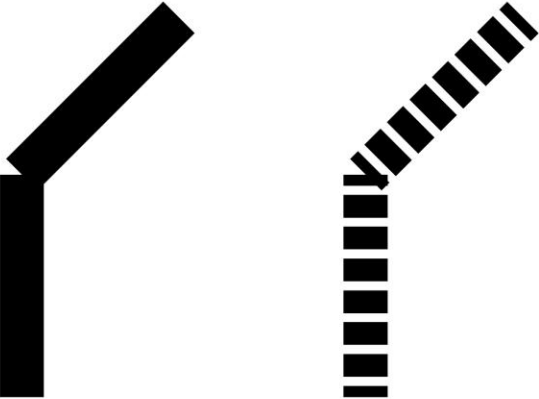
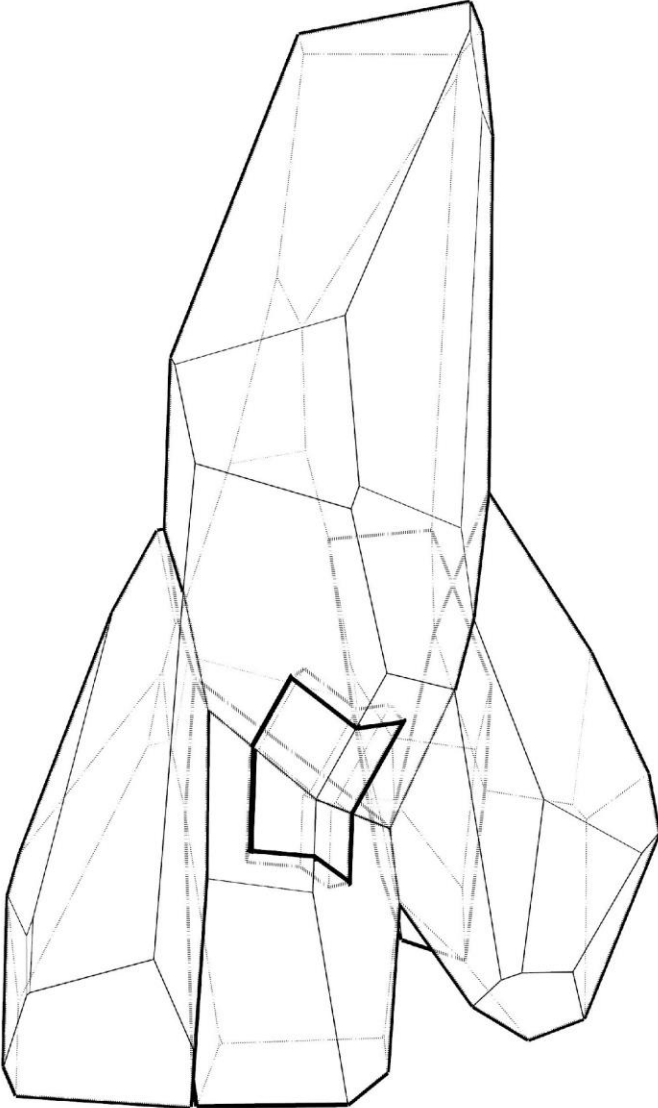


Assuming regolith-based 3D printing material has a similar structural performance to concrete

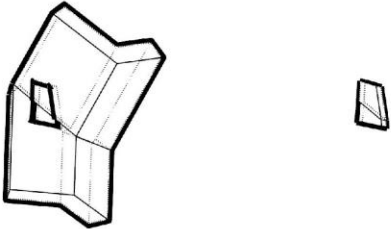
Fragment



Fragment

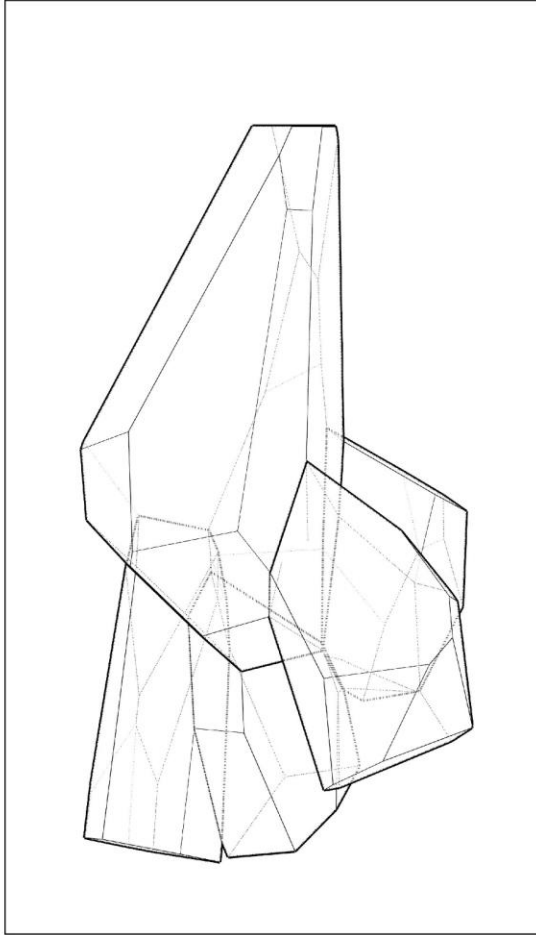


From vertical to inclined plane

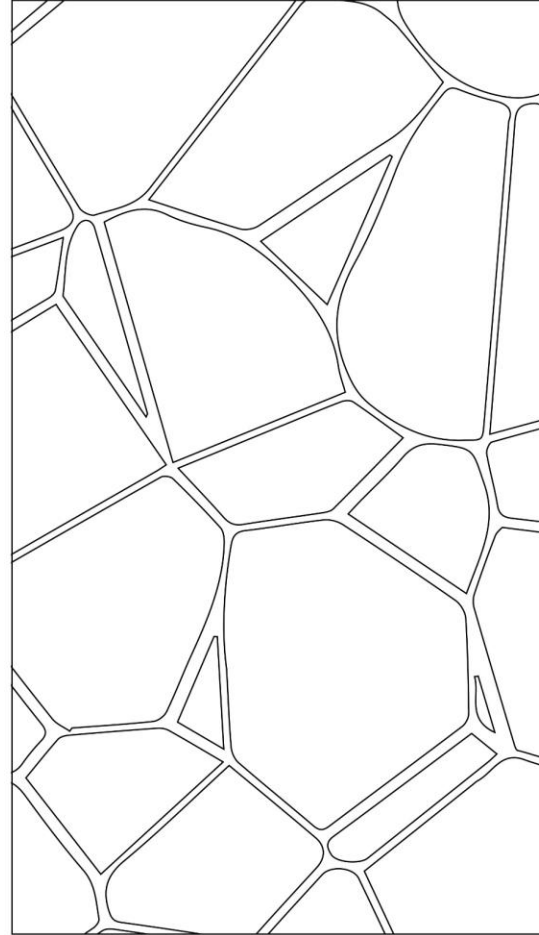


Why Voronoi?

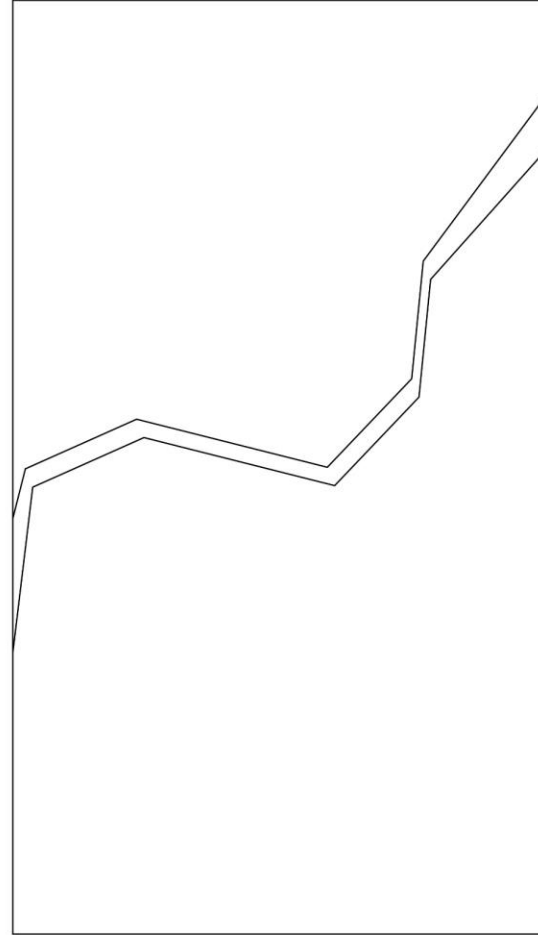
Sub-fragment



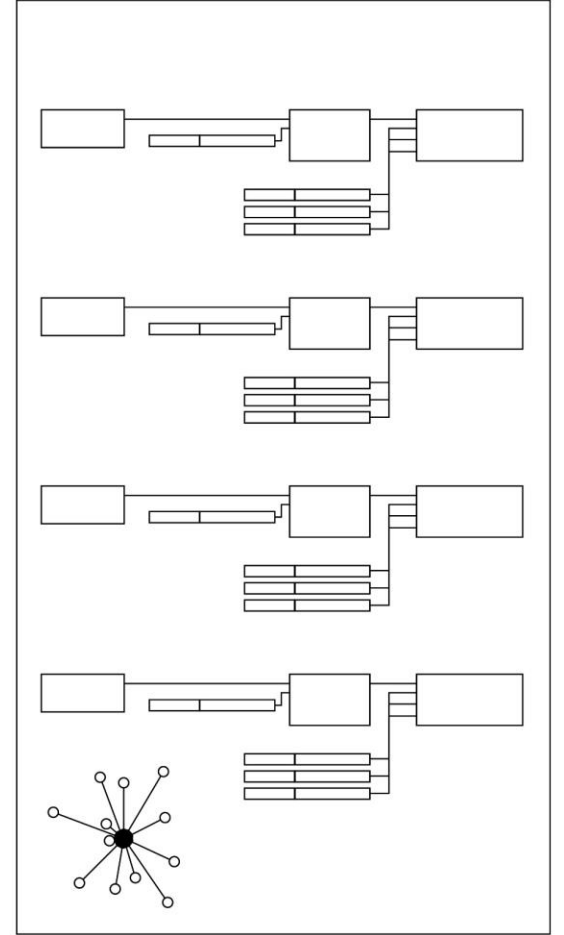
design language
consistency



resemblance to
nature

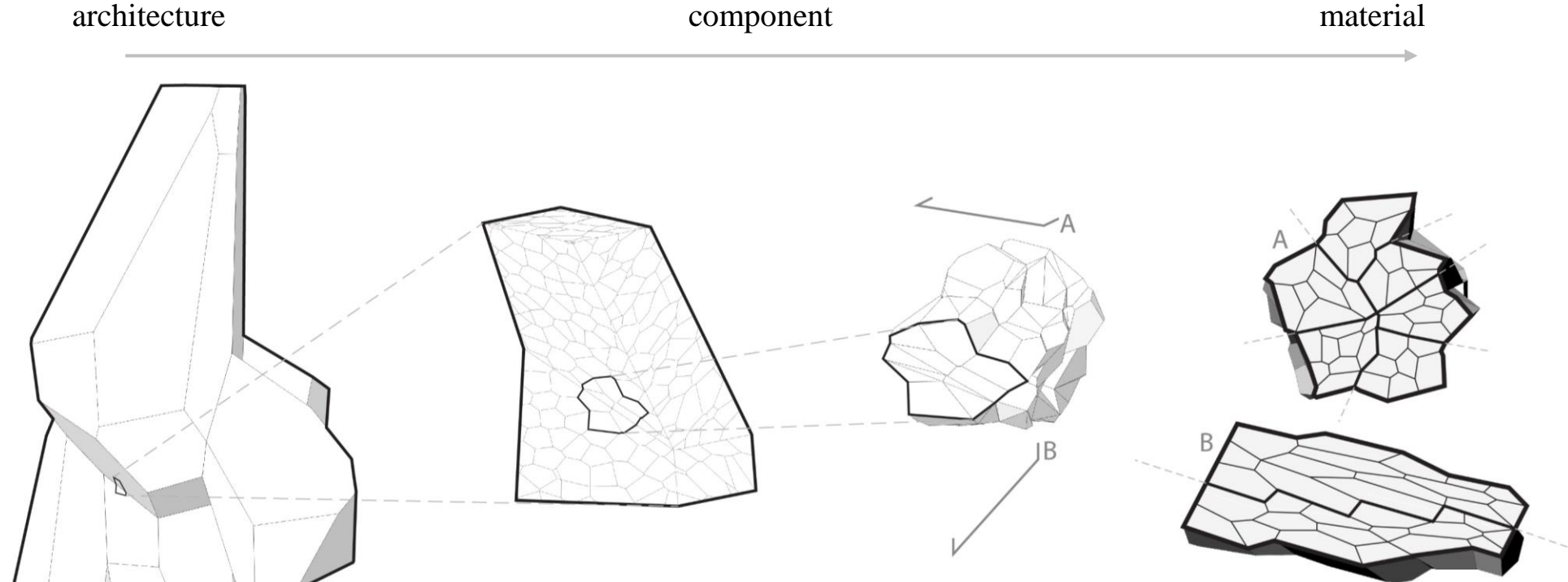


natural interlocking
properties



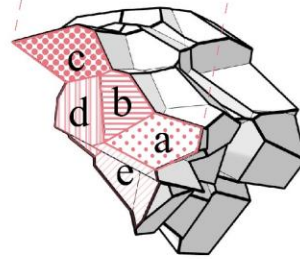
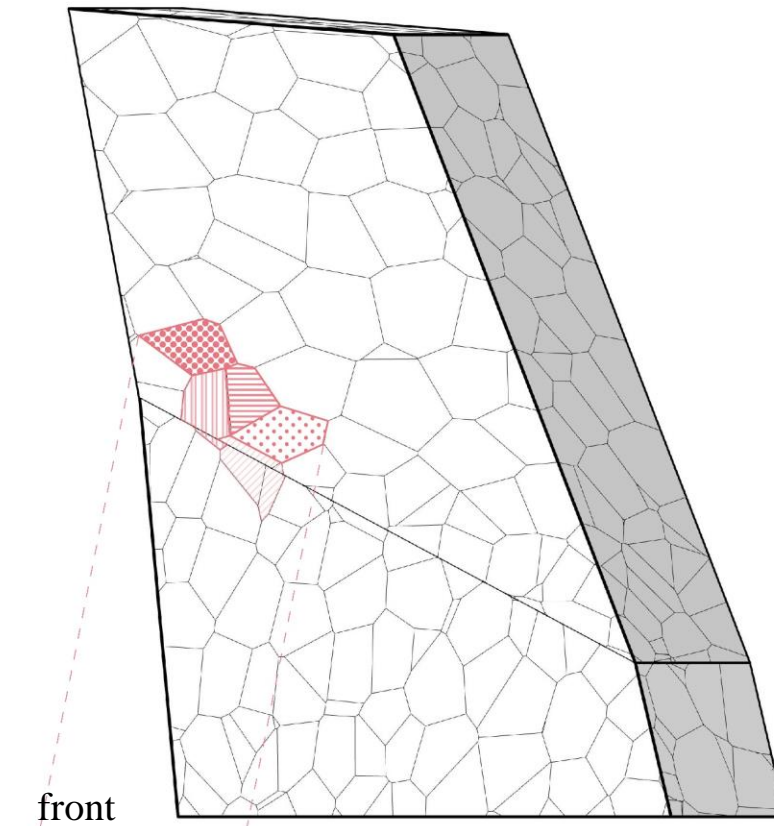
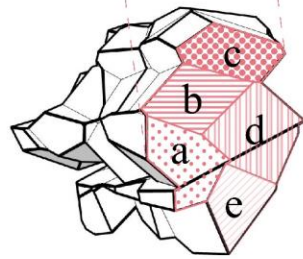
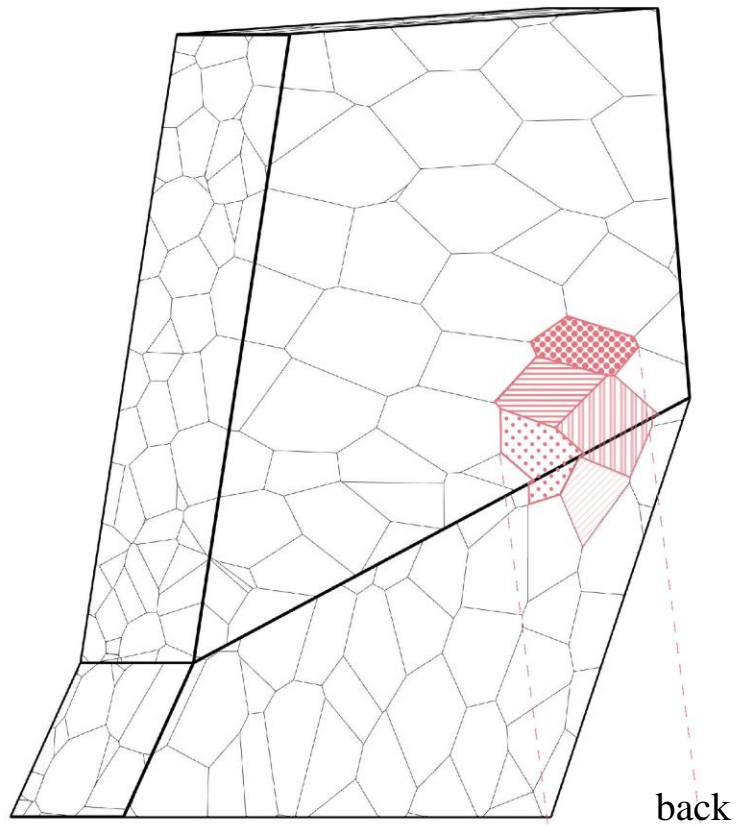
flexibility on rapid
computational generation

Sub-fragment

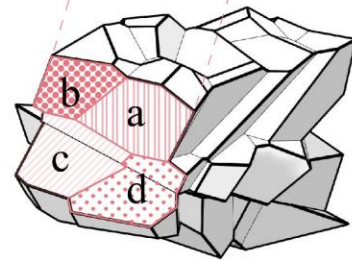
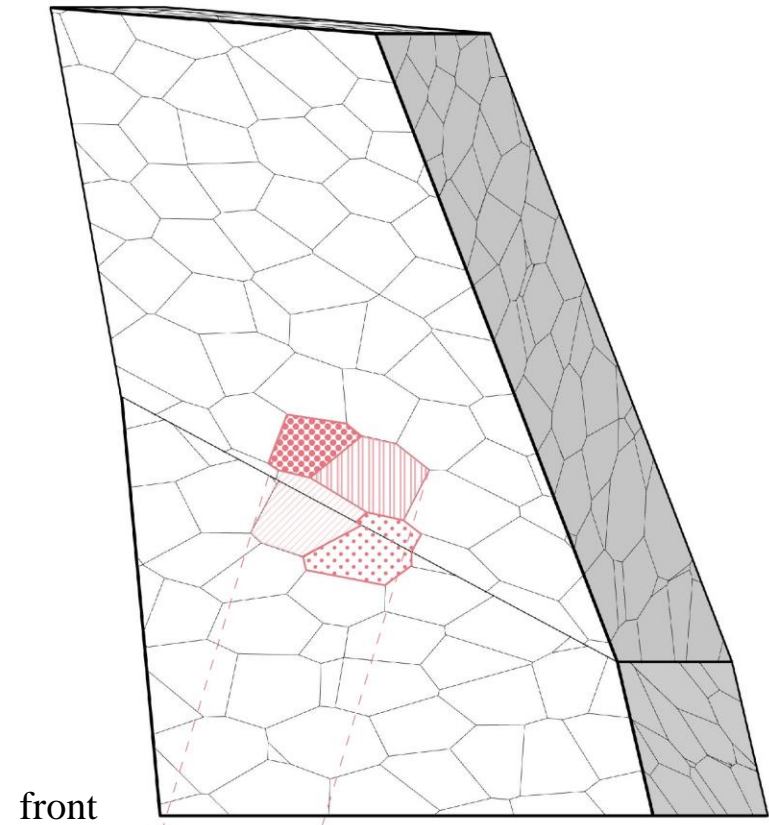
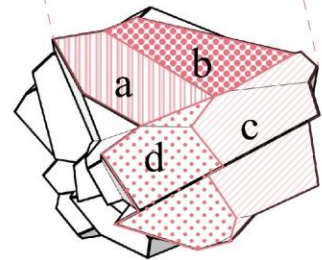
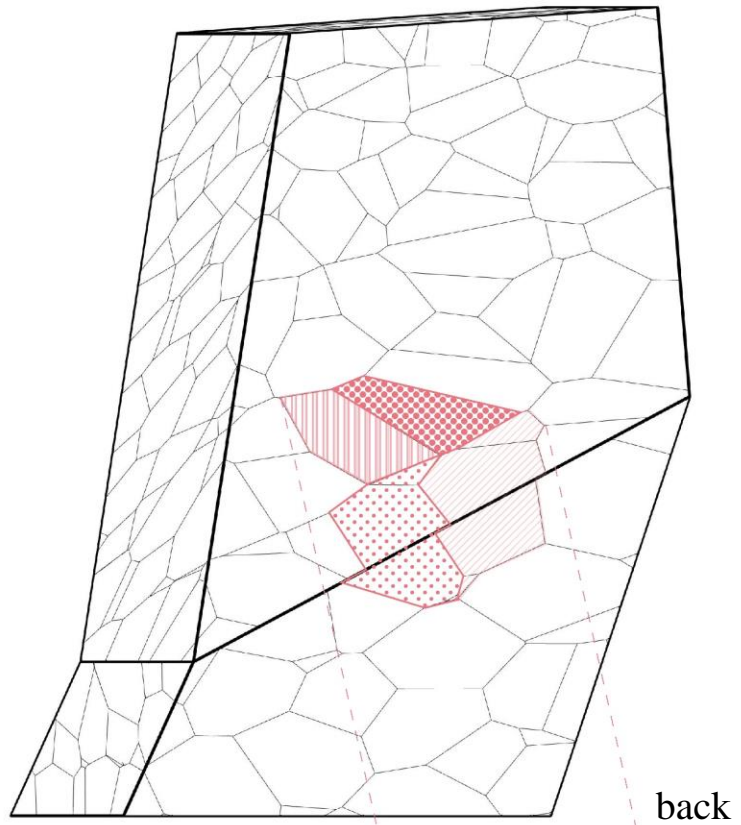


design language consistency
natural interlocking properties
resemblance to nature
flexible & rapid computational generation
material efficiency on complex geometry

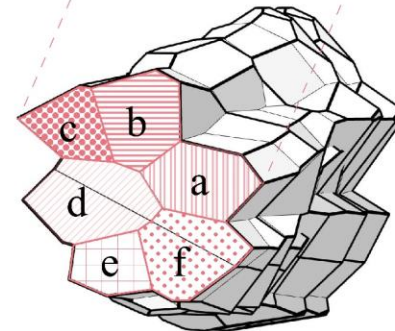
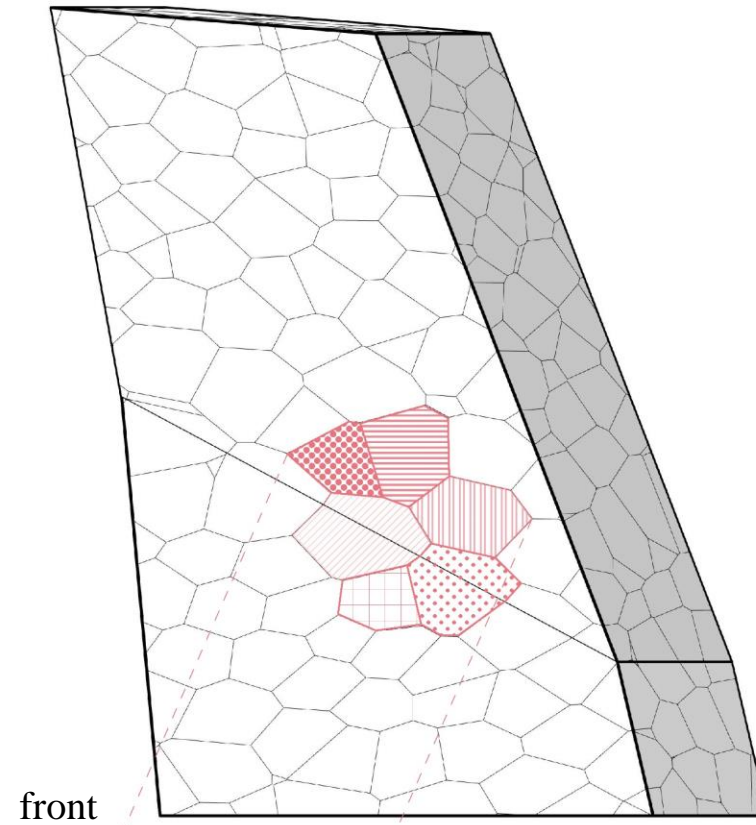
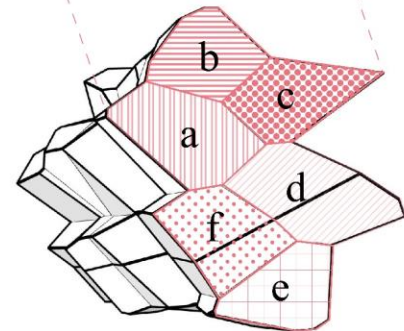
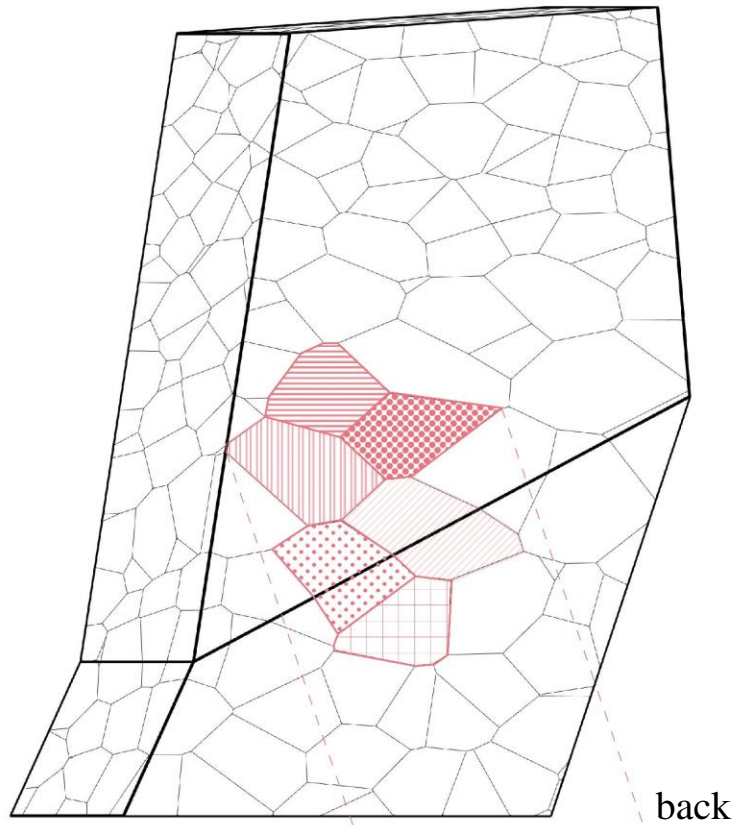
Sub-fragment



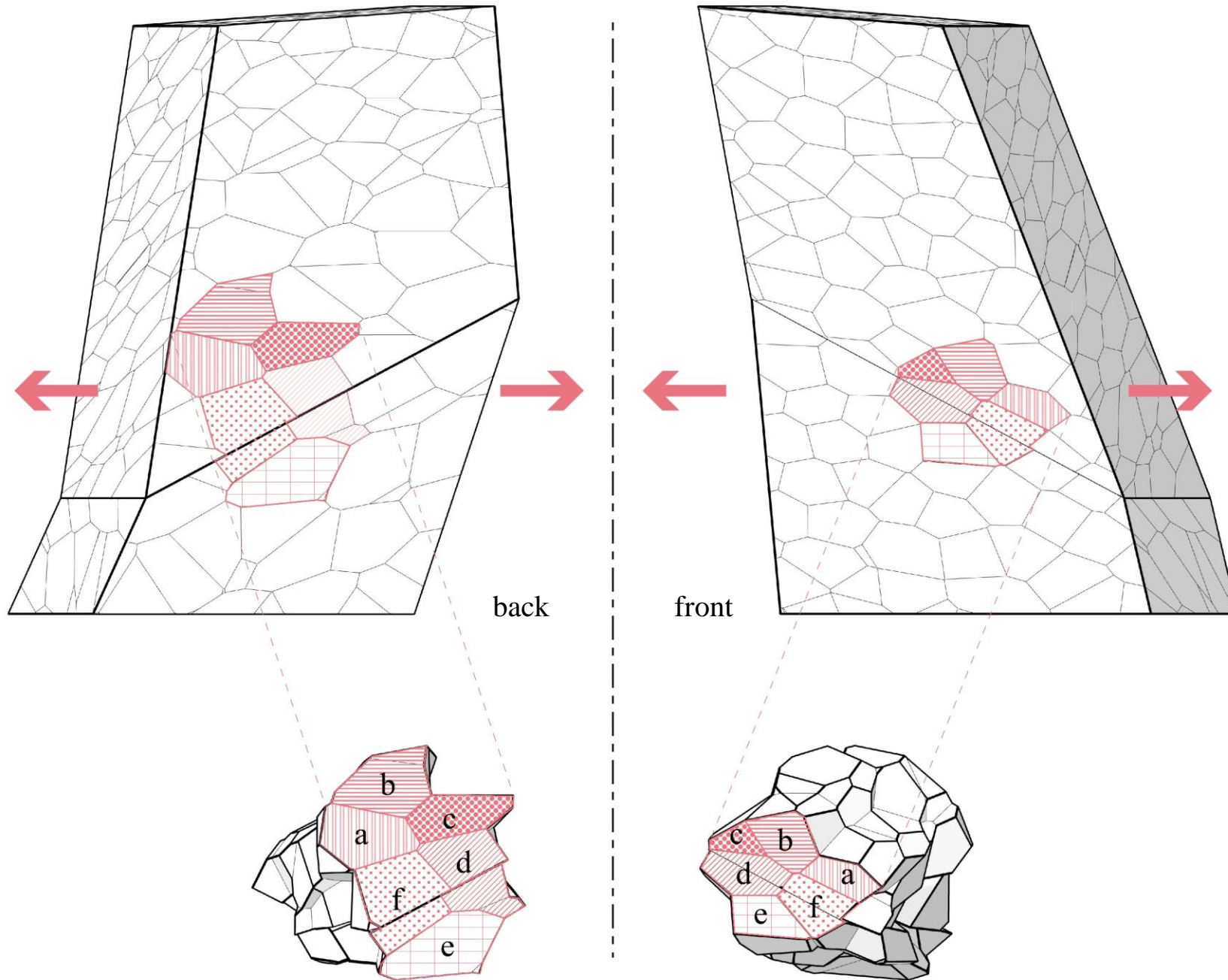
Sub-fragment



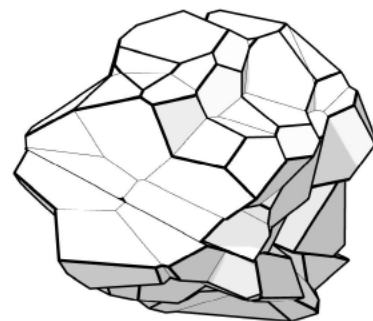
Sub-fragment



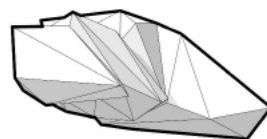
Sub-fragment



Sub-fragment



Sub-fragment



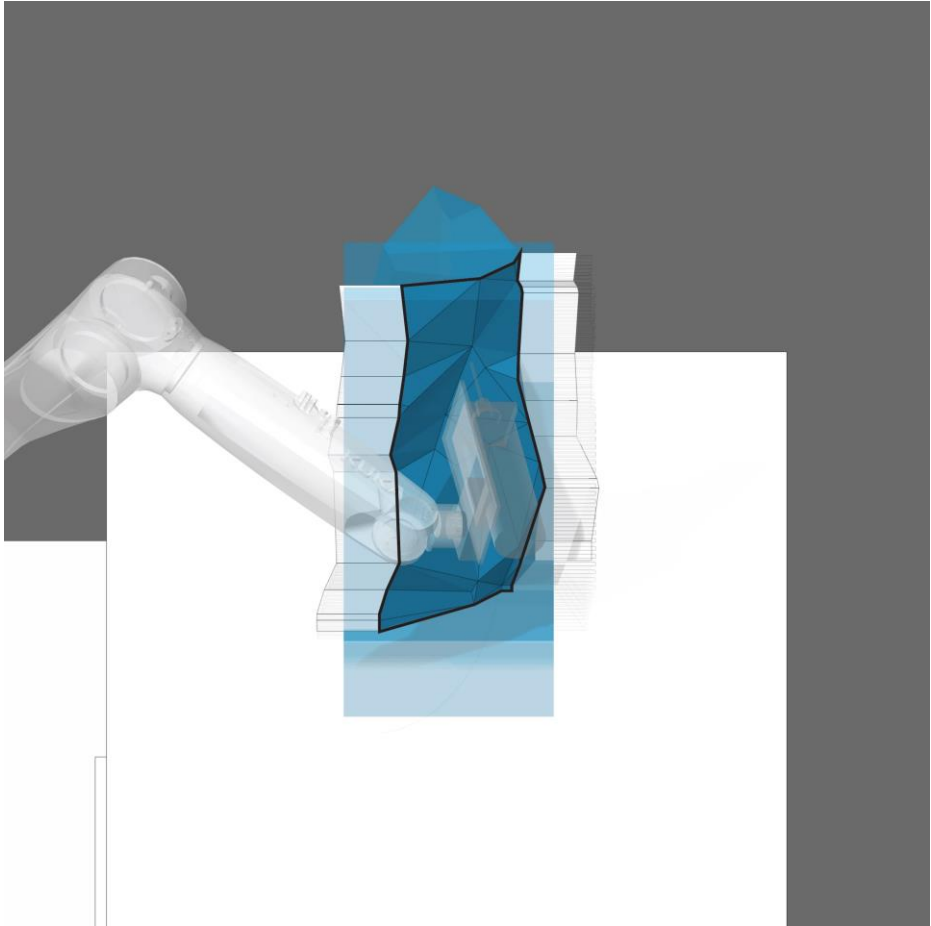
Fabrication: Milling



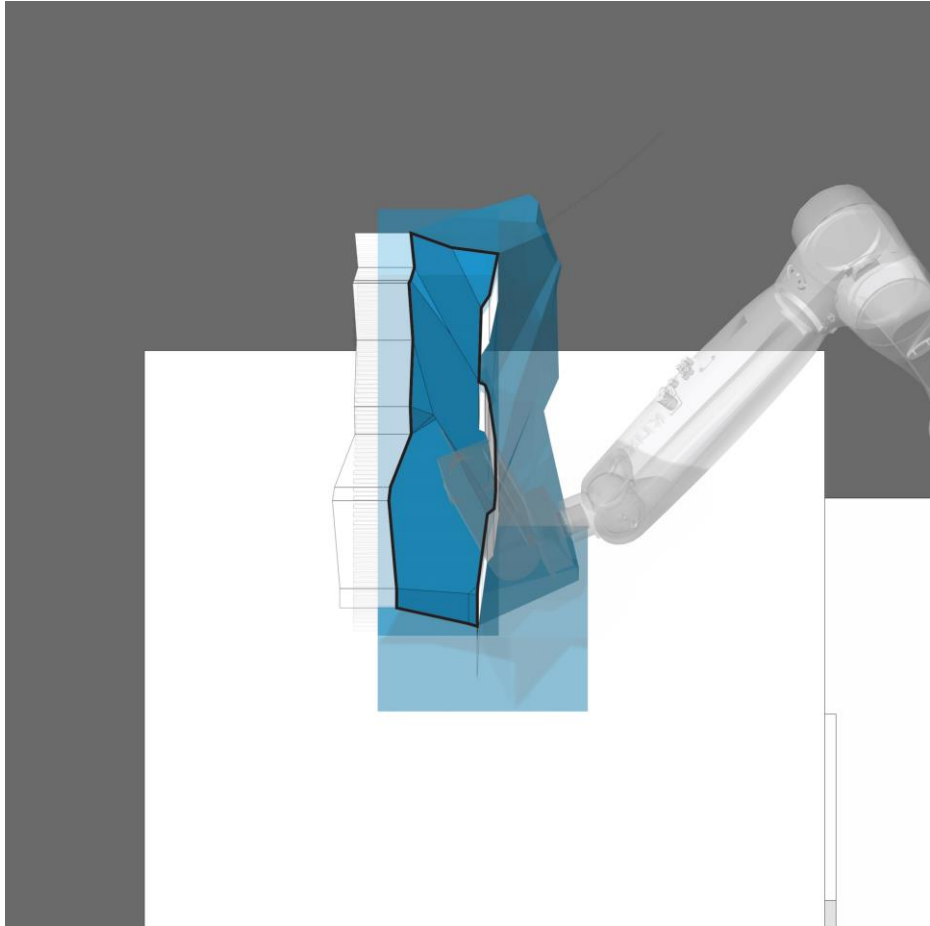
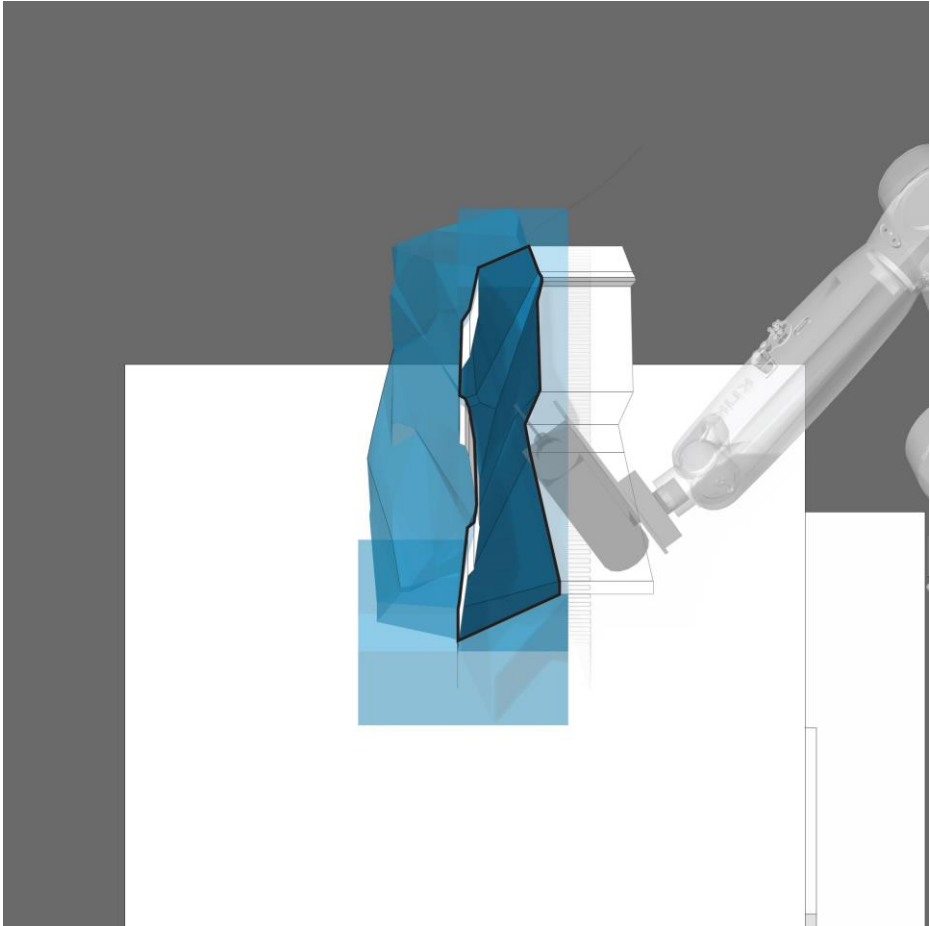
Fabrication: Preparation



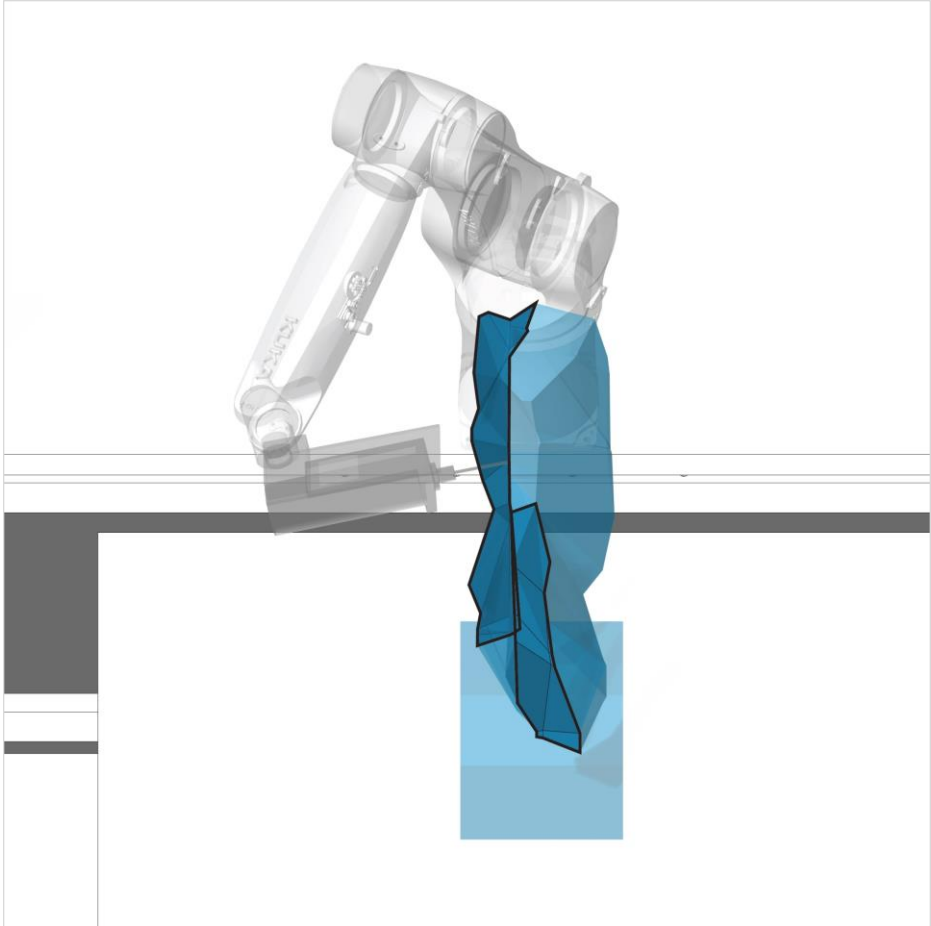
Fabrication: Main Sides



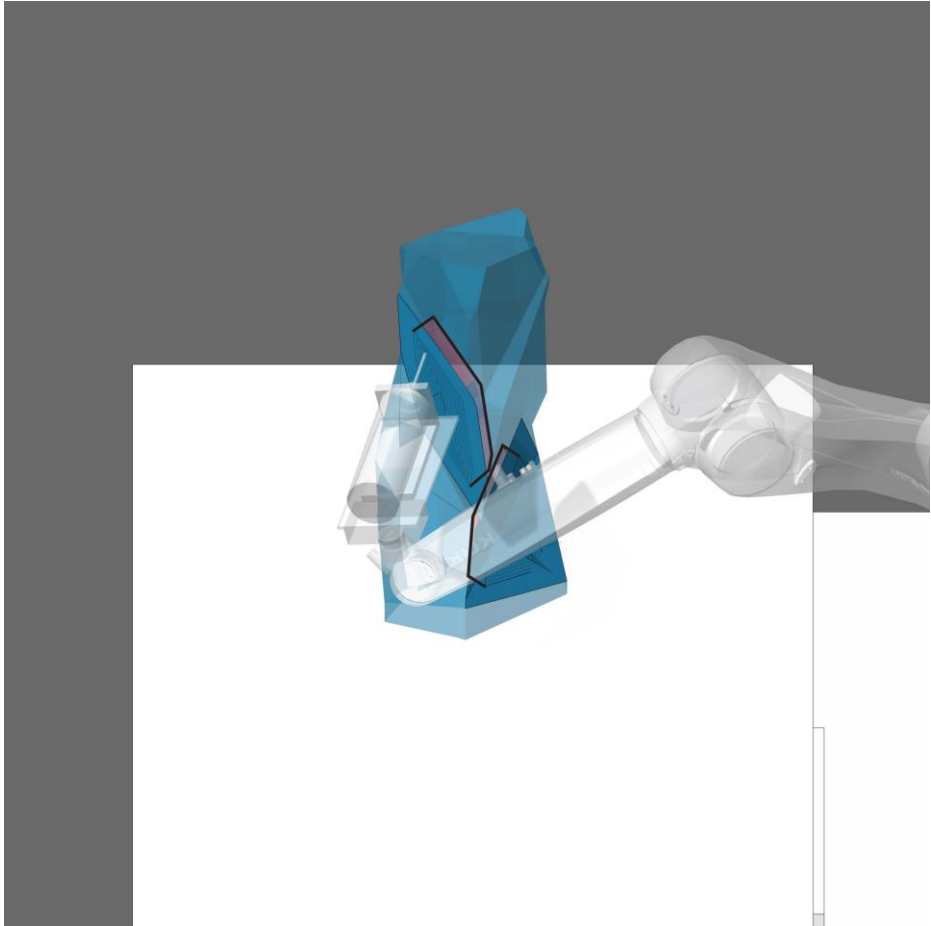
Fabrication: Main Sides



Fabrication: Far-reaching Sides



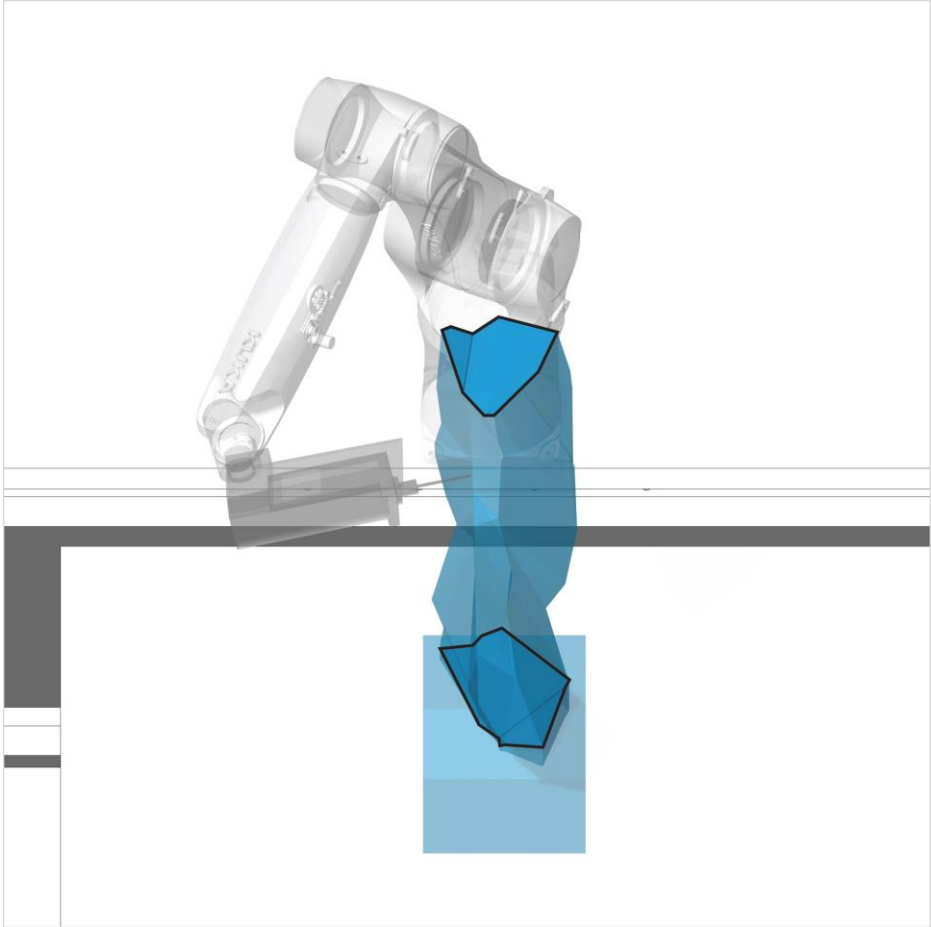
Fabrication: Holding Holes



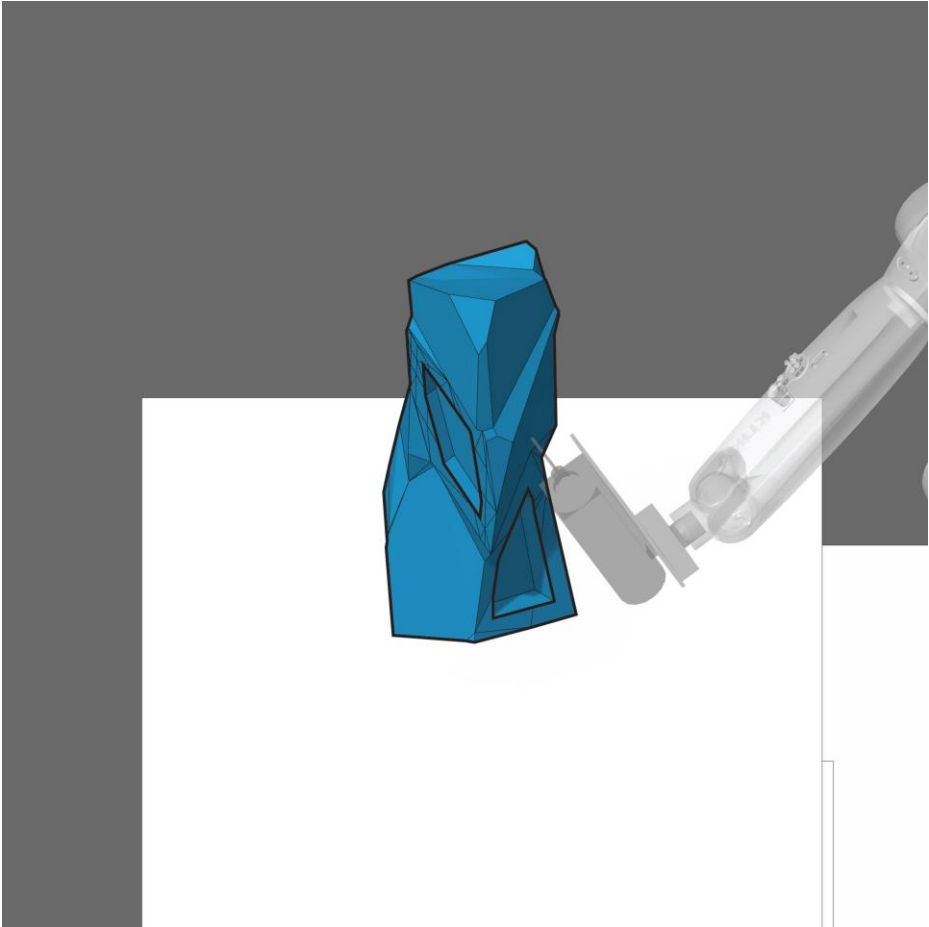
Fabrication: Holding Holes



Fabrication: Top and Bottom



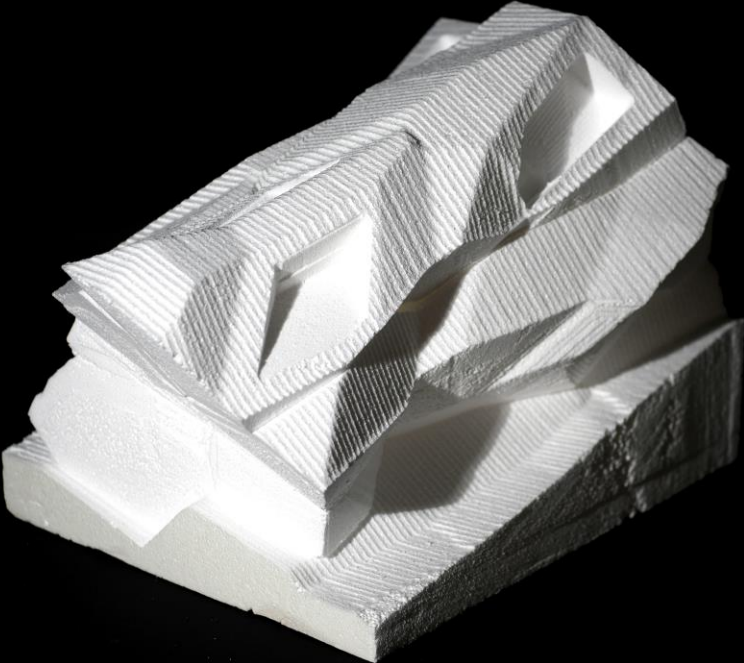
Fabrication: Finished Piece



Fabrication: Finished Pieces



Fabrication: Finished Pieces



Fabrication: 3D Print



3D Print Stacking

