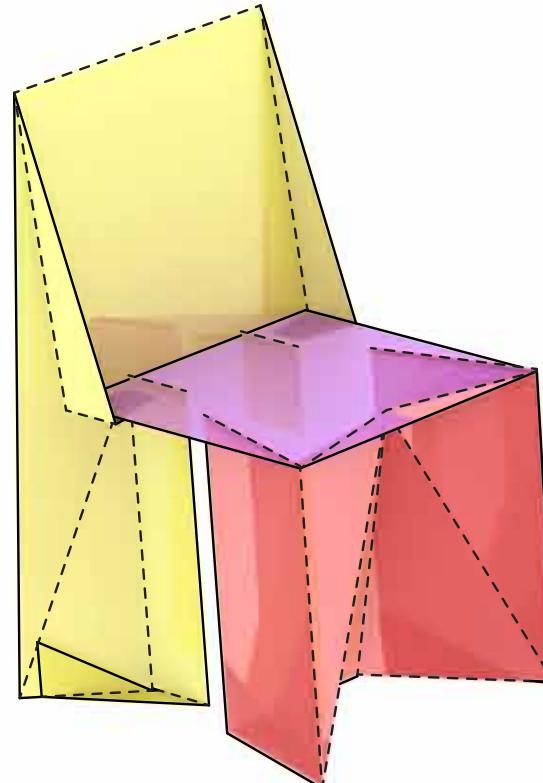


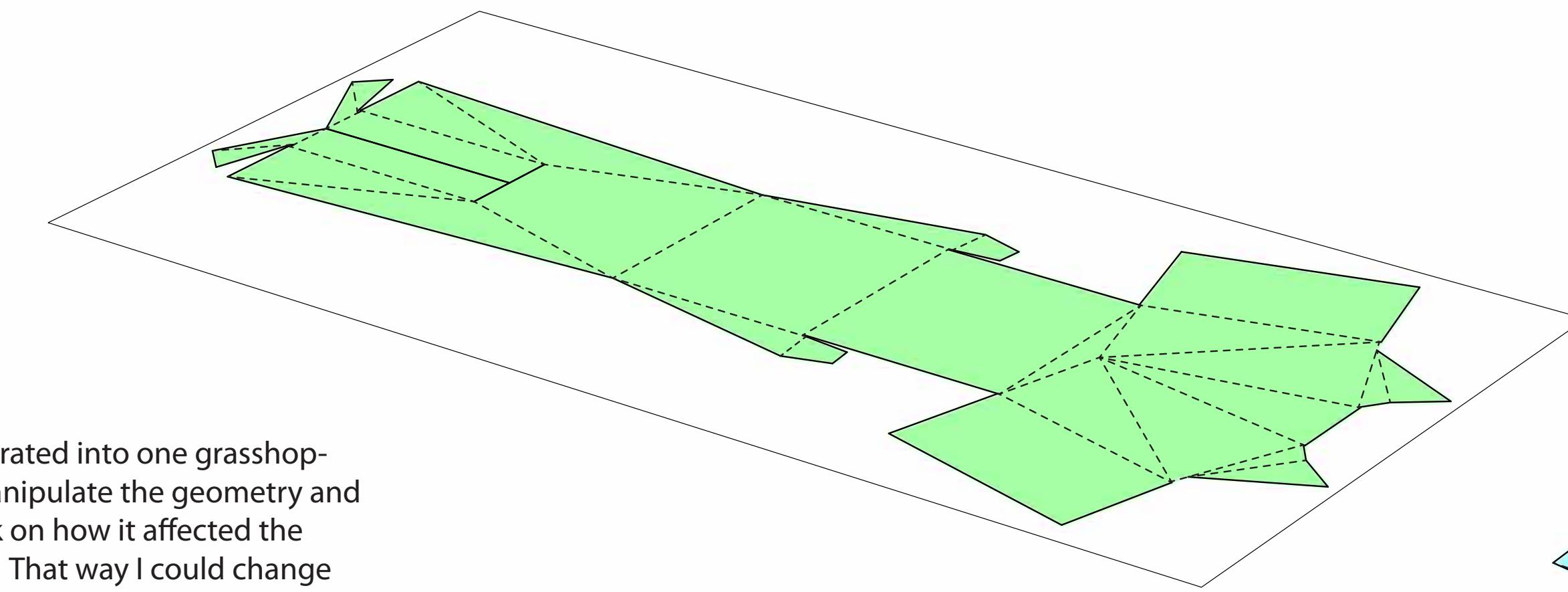
ORIGAMI CHAIR

JON HOUCK

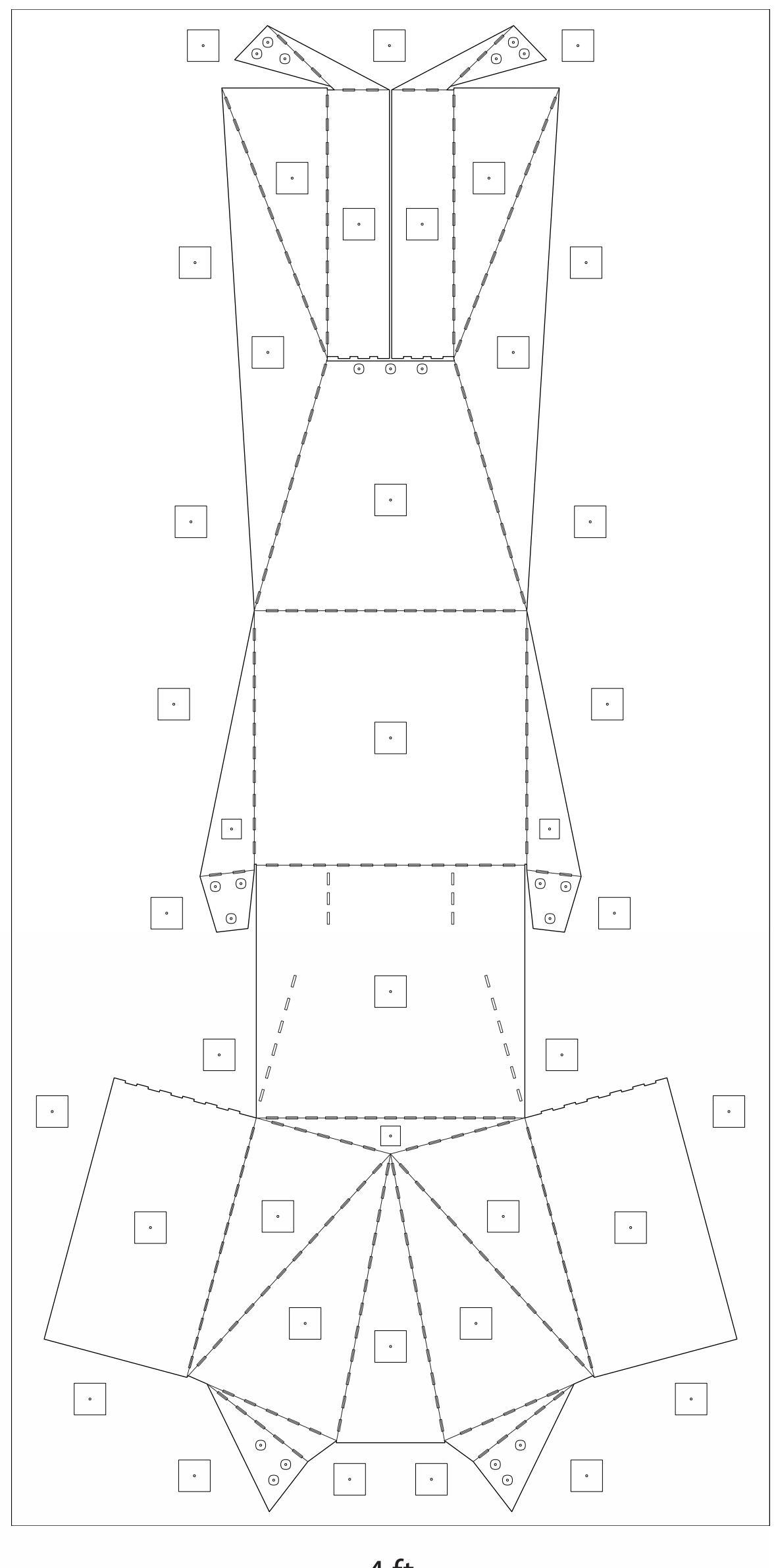
GRASSHOPPER
PRODUCT MAKING
SPRING 2012



3D MODEL

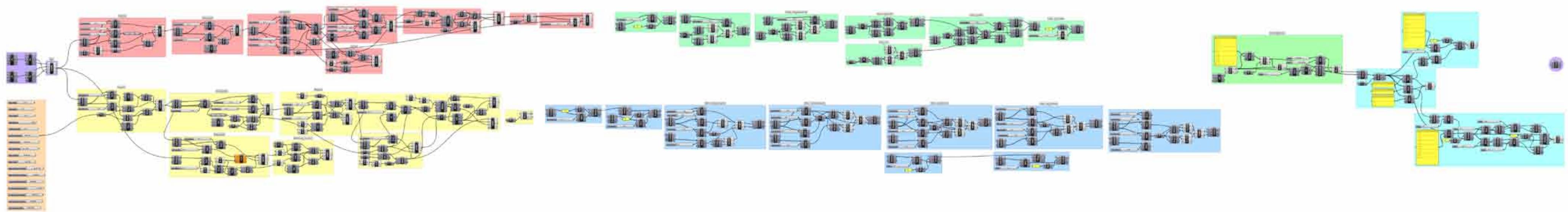


2D UNFOLD

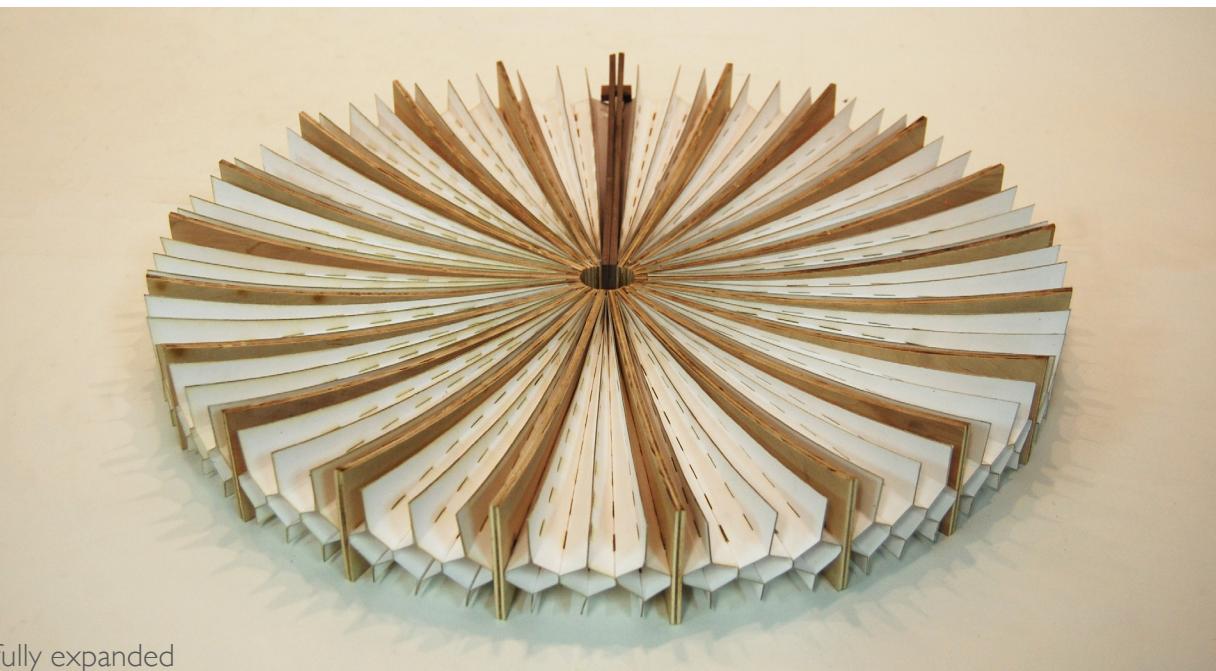
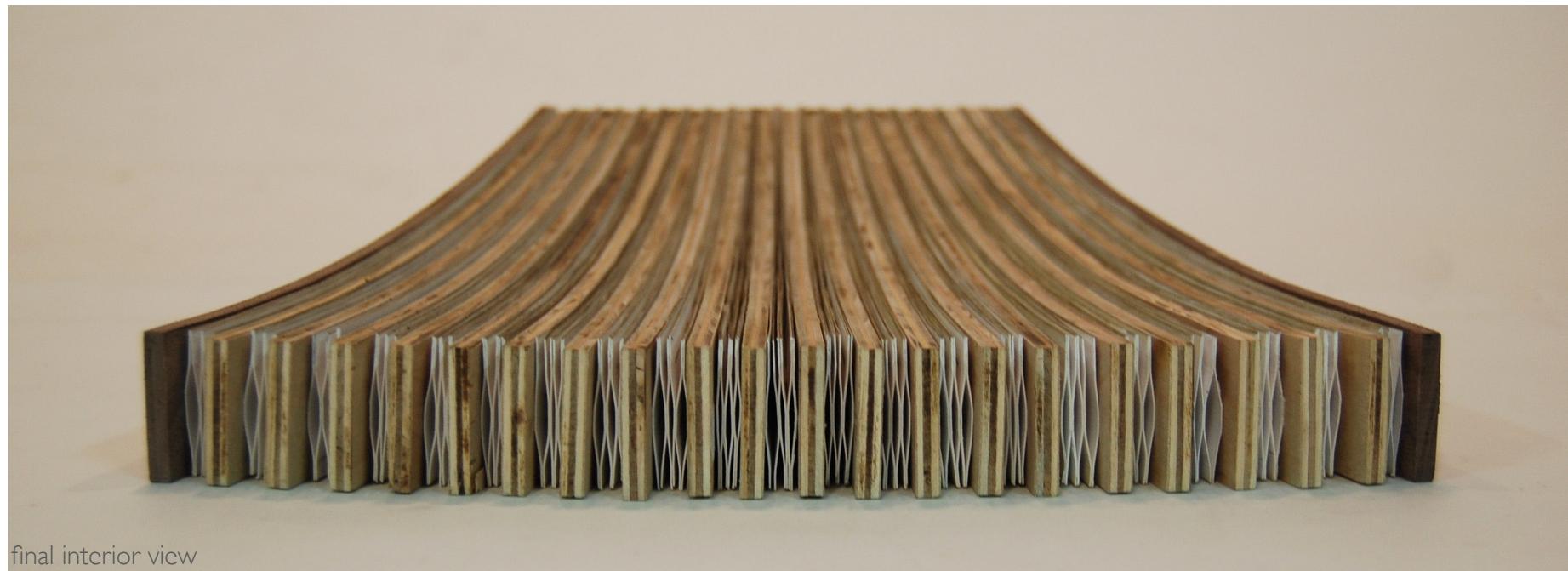


CNC CUTFILE

Using these 3 models all integrated into one grasshopper definition I was able to manipulate the geometry and folds and get instant feedback on how it affected the chair in each of these 3 states. That way I could change the shape of the chair and still allow it fit on my material (4'x8' sheet of polypropylene) and still be able to fold up into a portable shape.



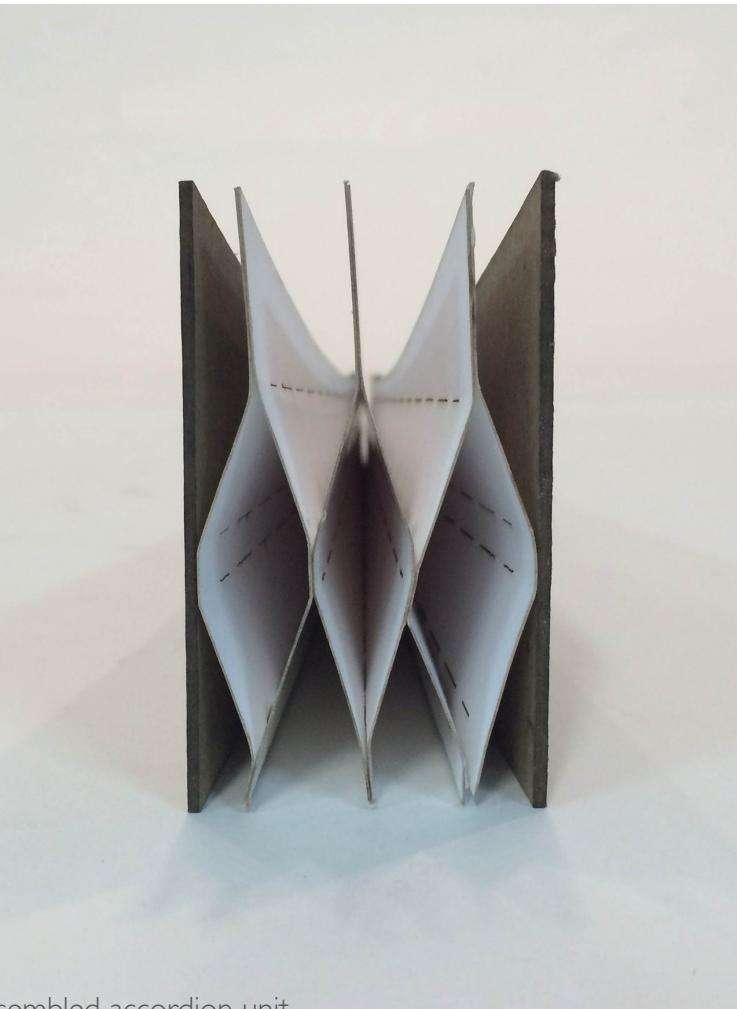
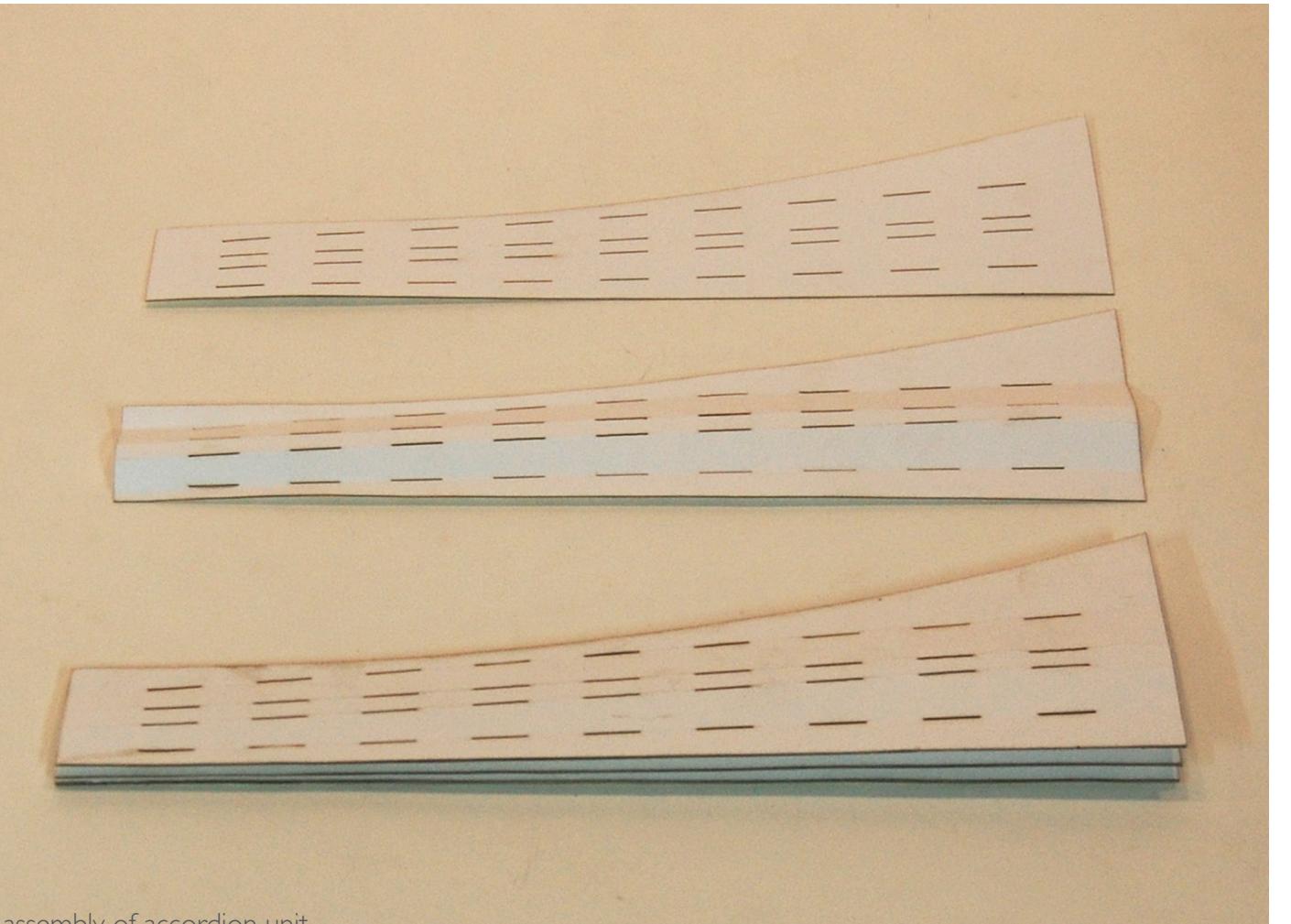
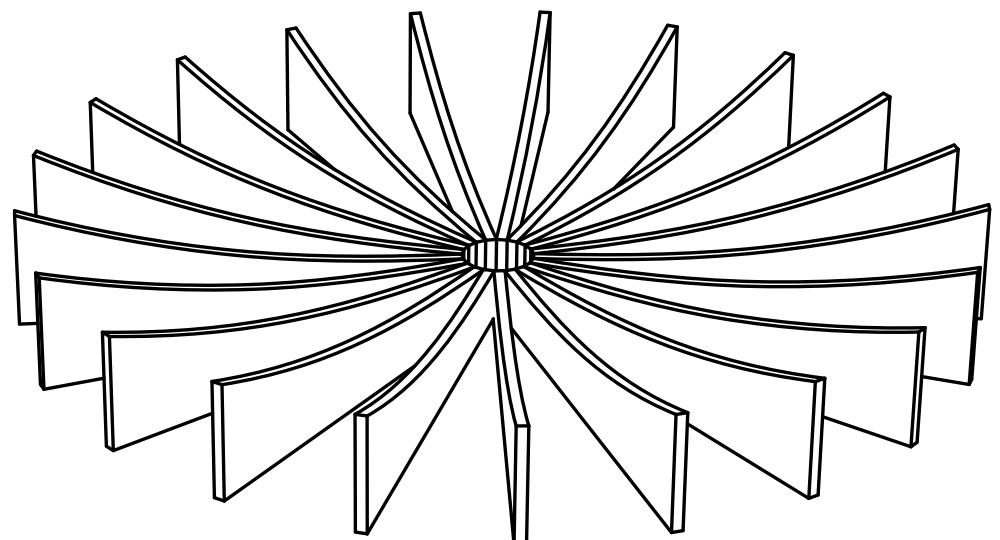
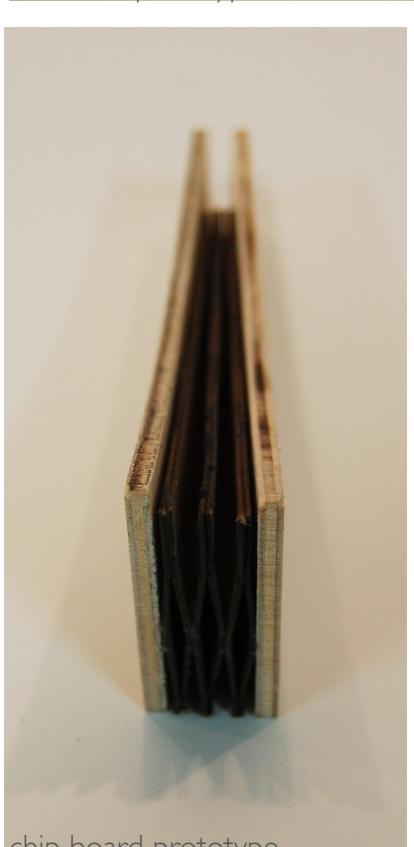
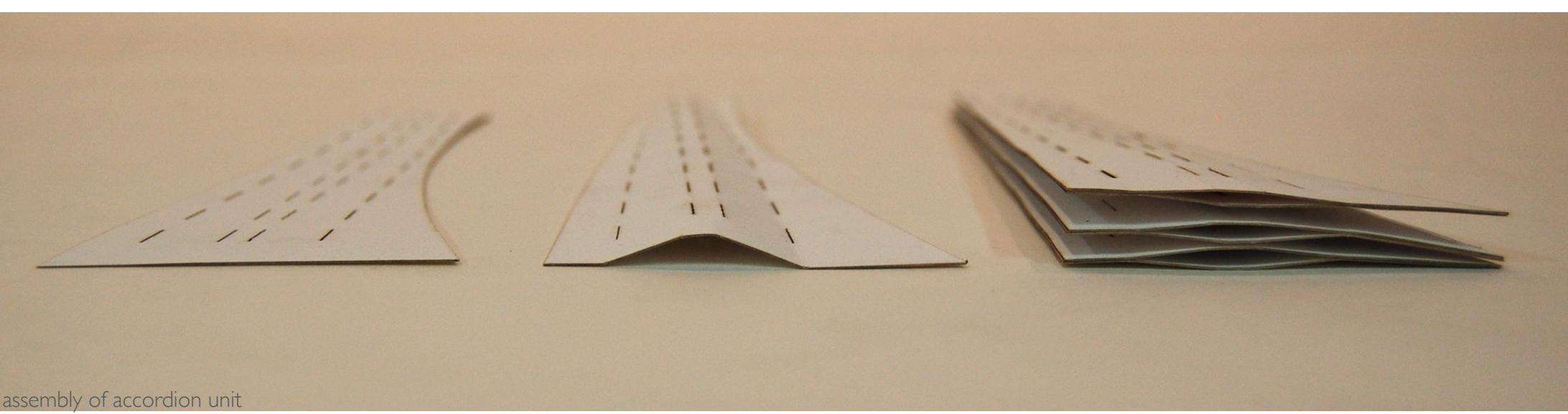
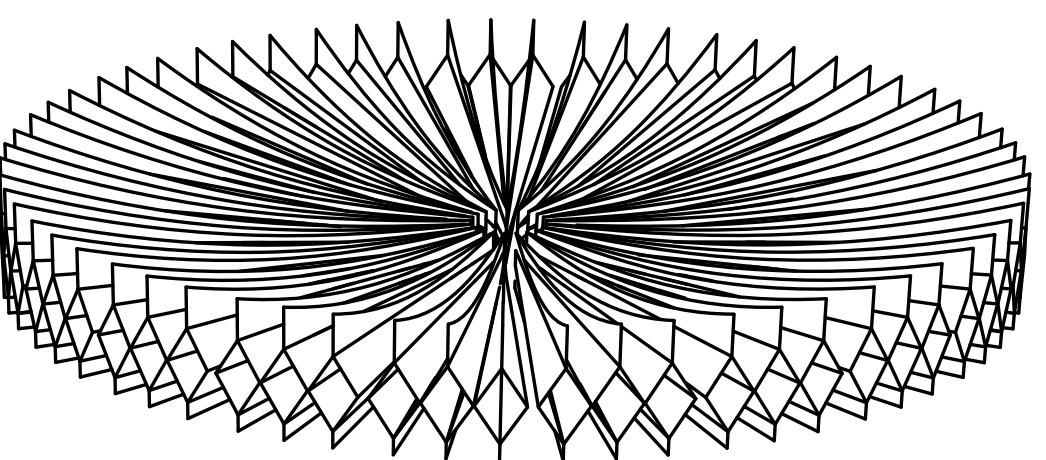
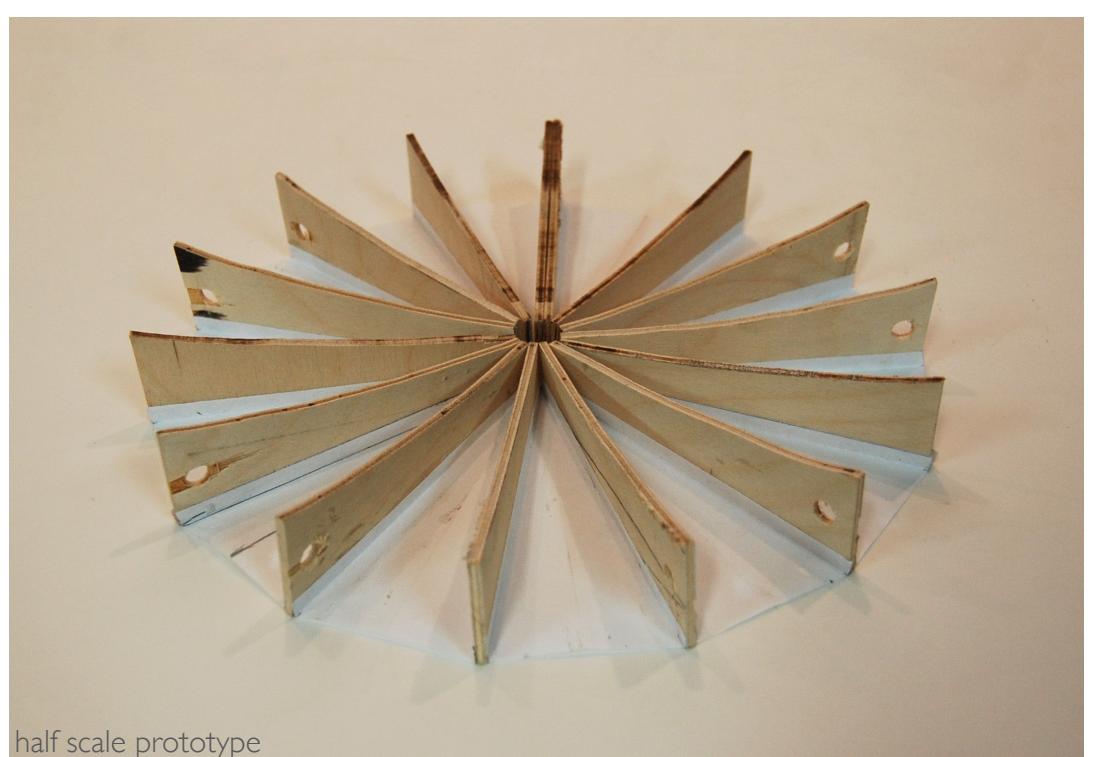
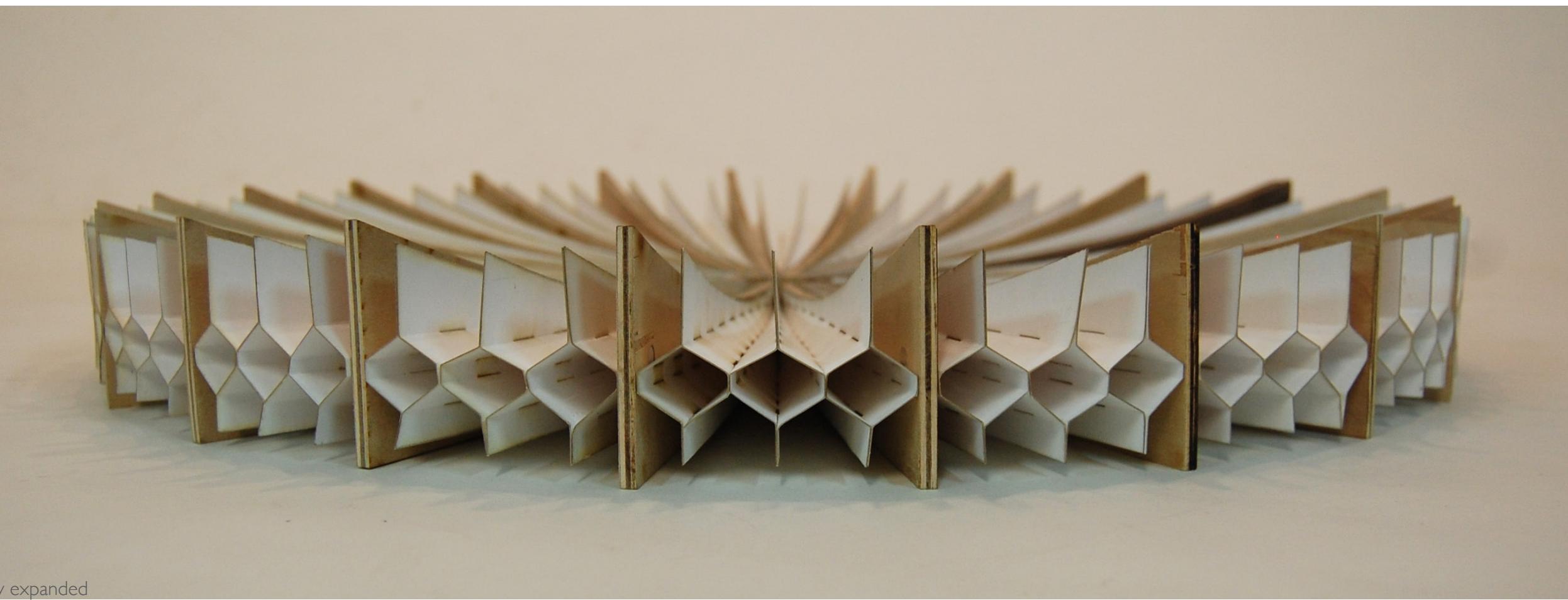
GRASSHOPPER DEFINITION

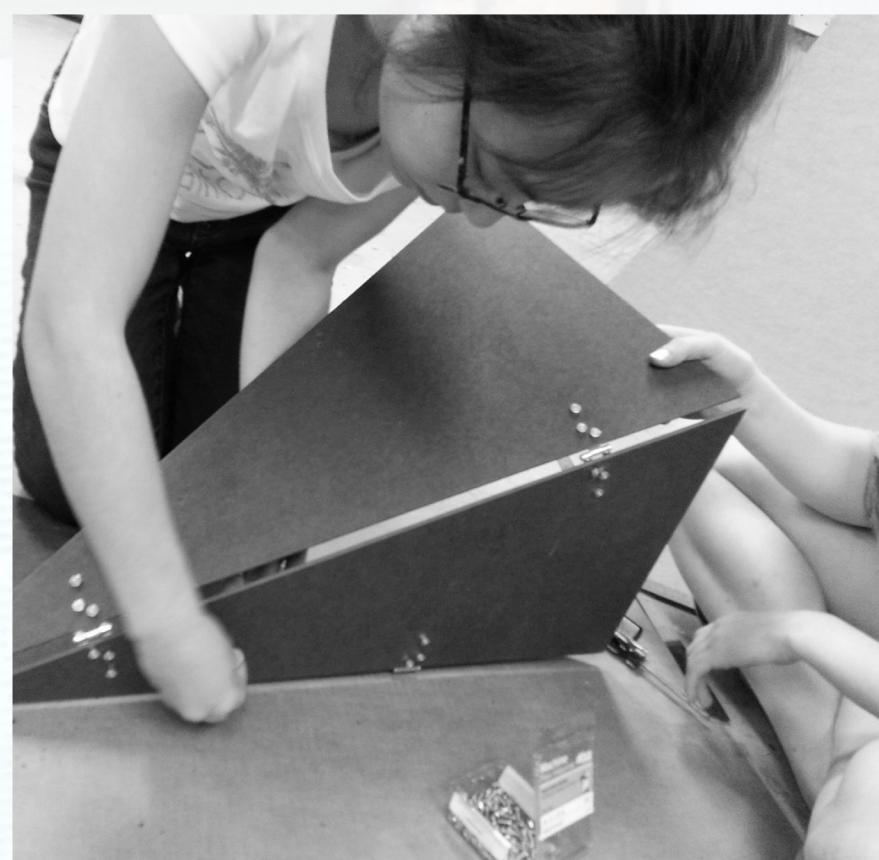
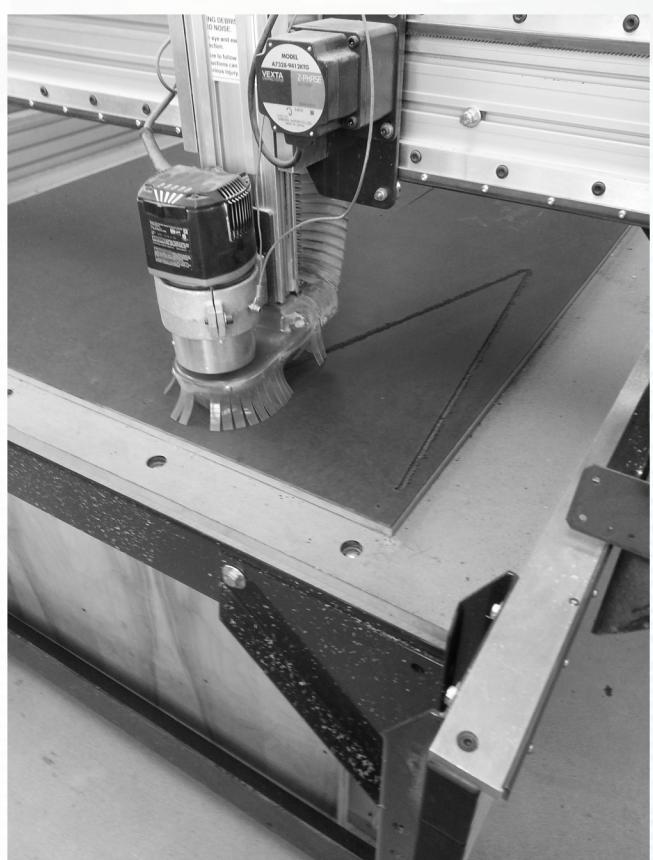
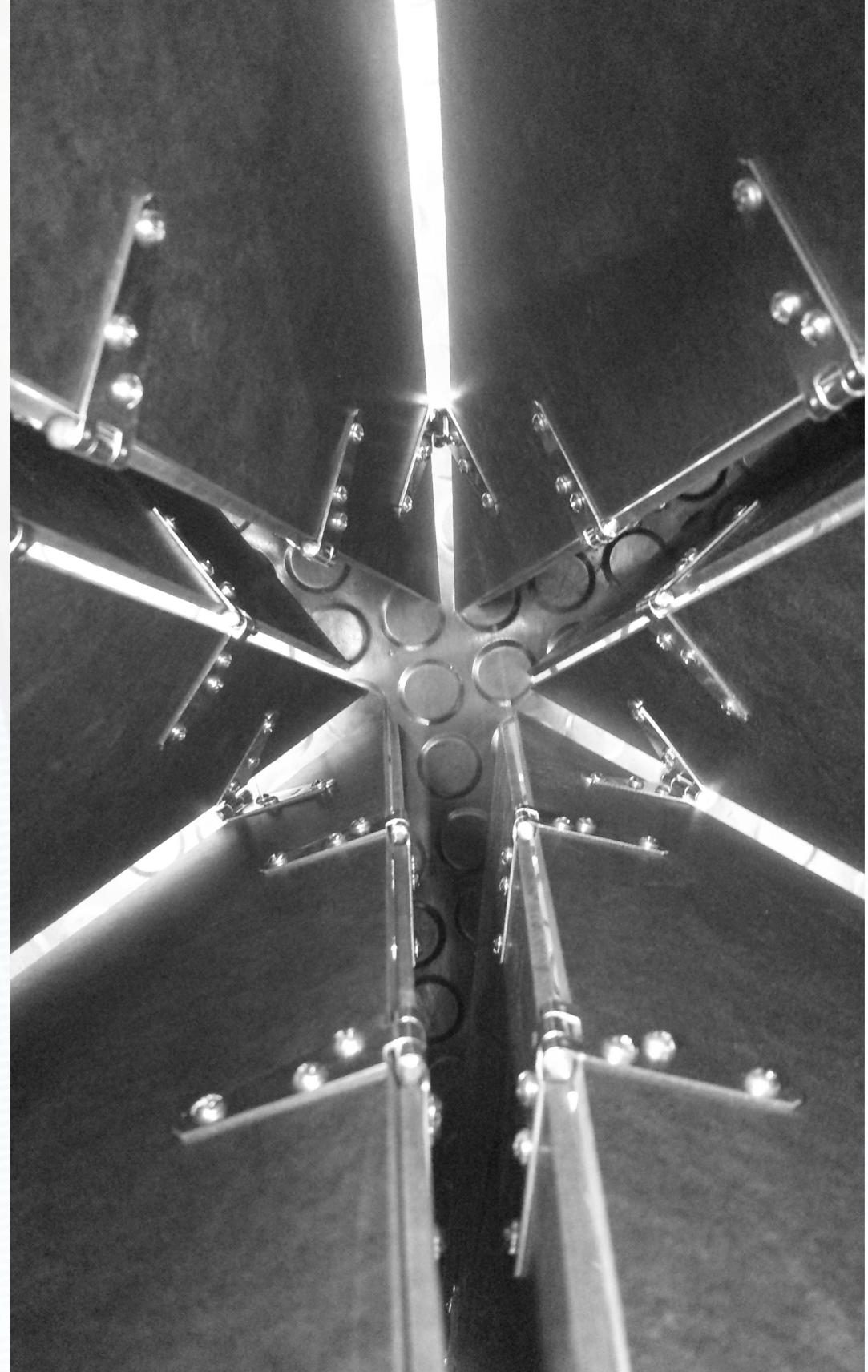


expansion bowl

the main goal from the beginning was to have a bowl that would serve as a full sized fruit bowl, but when not in use, could be folded into a much smaller package. the accordion bowl was formed from this idea. the wood ribs create the structure and support the fruit, while the paper acts as a tension member to ensure the ribs are evenly spaced apart. magnets are embedded in each rib to establish a rigid form when closed. both the ribs and the paper tension member were laser cut from the same shape.

jacob johnson | december 5, 2013





The final product is a short table that appears to be made of two intersecting inverted pyramids. This created an object that is symmetrical both rotationally and axially. It is composed of twelve identical triangular panels which fold back and forth via a system of triangular hinges which create flexible joints. Because each hinge has a series of three screw connection points, the visible nuts on the exterior of the panel create an intriguing triangular pattern.

