Design Fundamentals
ART 320 Online

PROJECT 4 – LINE

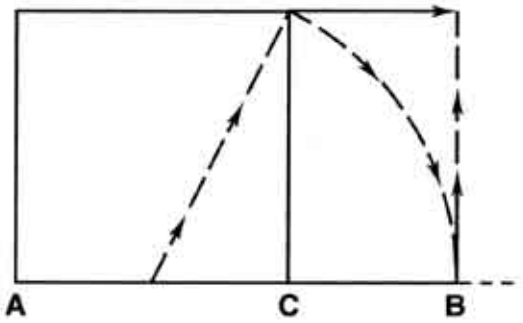
Read Chapter 4 Scale and Proportion, Chapter 7 Line and Chapter 9 Pattern and Texture in Design Basics.
Read the lecture notes on LINE – Introduction, linked from Content> COURSE MATERIALS> Projects – 2nd Half> Project 4 – Line.
Watch the Flash movies on LINE – Project 4.
Watch the PowerPoint presentation on LINE – Project 4.
Watch the Lynda.com movies: #12, 15, and 18, in Illustrator CS5 Essential Training.

SYNERGY or synergism (from the Greek synergos meaning working together, circa 1660) refers to the phenomenon in which two or more discrete influences or agents acting together create an effect greater than that predicted by knowing only the separate effects of the individual agents.

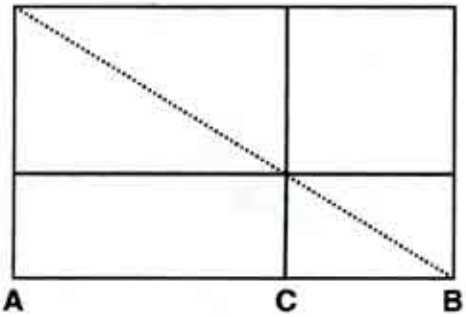
Synergy is the main principle at work in this assignment with line. Tangential concepts are: the elements of texture, space, shape, and proportion, coupled with observational drawing.

Part I. Draw an object of your choosing in pencil. It does not have to be "realistically" drawn, but should be recognizable. Practice drawing your object from direct observation and draw it at least three times from different points of view such as side view, ¾ view and/or seen from above or below. Scan the thumbnail drawings and upload to Dropbox> Project 4 – Line > Thumbnails, as a .jpg file. You can do all the thumbnails on one page that you scan. You can review the SCANNING TUTORIAL (see COURSE MATERIALS, PROJECT 4 – LINE, Tutorial on Scanning) if necessary for Part I. Thumbnails are worth 10 points.

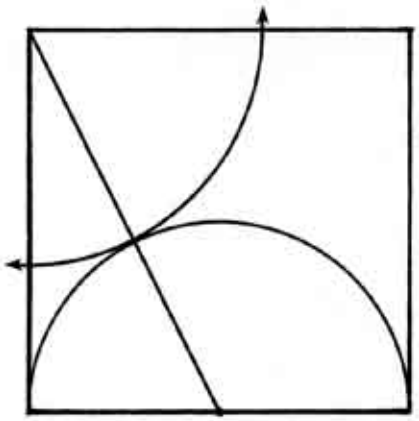
Part II. In Illustrator, create a new file with **Web** as your setting again, 800 x 600 pixels, and pixels as your unit of measurement. (You will be working inside this dimension to create your composition's length and width dimensions). You may create a rectangle from a "golden section" with internal subdivisions based upon the golden section formula. Or, you may subdivide a large square using the golden section. Or you may use a division of thirds formula to determine the shape and subdivisions of your composition. See the instruction below for this part of the assignment:



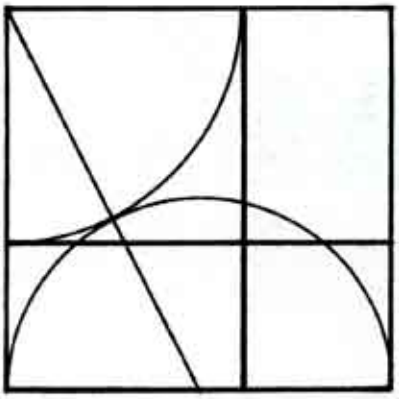
A golden rectangle may be found by extending the baseline of a perfect square in one direction. With a compass point fixed on the center of the square's baseline, draw an arc from the upper corner of the square down to the extended baseline. Having thus located the length of the new rectangle, draw a line upward to the line extended from the top of the square.



A diagonal line drawn across the new rectangle will cross the original square where the golden mean should be drawn parallel to the baseline. Measuring the sides of the golden rectangle will expose some interesting mathematical relationships. Comparing the original length of the square (AC) to the length of the new rectangle (AB) will reveal the same ratio as that of the length of the new addition (CB) to the original square (AC). That ratio will be 1 to 1.6180.



A golden mean may be achieved by projecting into a square as well as by projecting a square into a rectangle. From the center of the base of the square, draw a semicircle inside the square. Next draw a line from the center of the baseline to the square's upper corner. Where the diagonal crosses the first circle, establish a radius from the upper corner, and draw an arch to the top and side of the square.



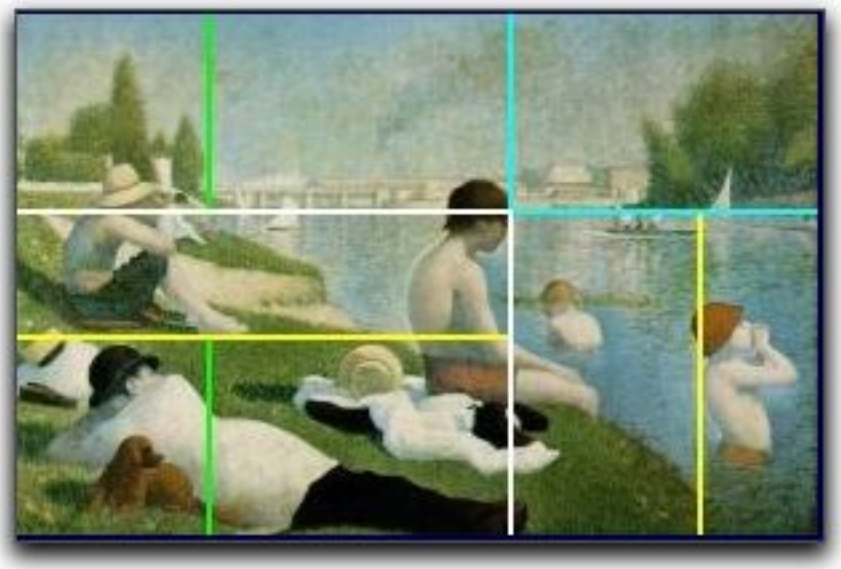
Lines drawn parallel to the top and side of the square from the points of intersection by the second arc will subdivide the square into golden rectangles with the mathematical ratio of 1:1.6180. This process may be done again from the opposite side or repeated in the new squares just created. This subdivision could continue on indefinitely revealing the same ratio of 1:1.6180.

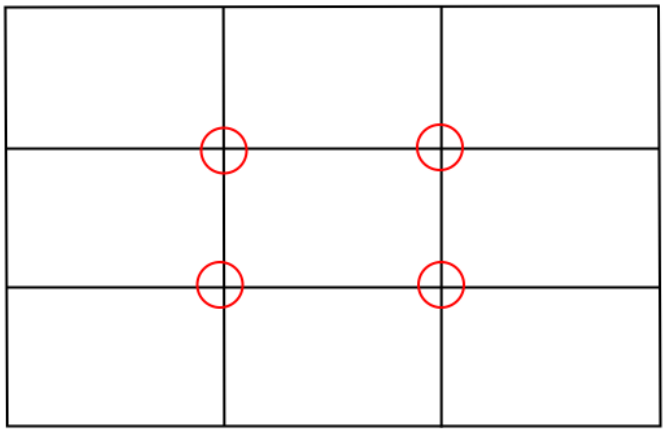
The golden section is a formula that has been used by architects and artists as a proportional guide for centuries. You can read about its history in your text and also on this website:

http://images.google.com/imgres?imgurl=http://www.mlahanas.de/Greeks/images/GSConstr.gif&imgrefurl=http://www.mlahanas.de/Greeks/GoldenSection.htm&h=455&w=343&sz=10&hl=en&start=0&um=1&tbnid=of_LkNaJPK2DSM:&tbnh=128&tbnw=96&prev=/images%3Fq=golden+secth

Copy and paste the above URL into your browser and read about the history of this important geometric phenomenon.

Artists who used the golden section placed areas of **emphasis** or **focal points** at the intersections of internal lines. This is where you might place your content that you want the viewer to notice first. Look at the painting by Seurat and see if he was using the golden section for arranging his composition.





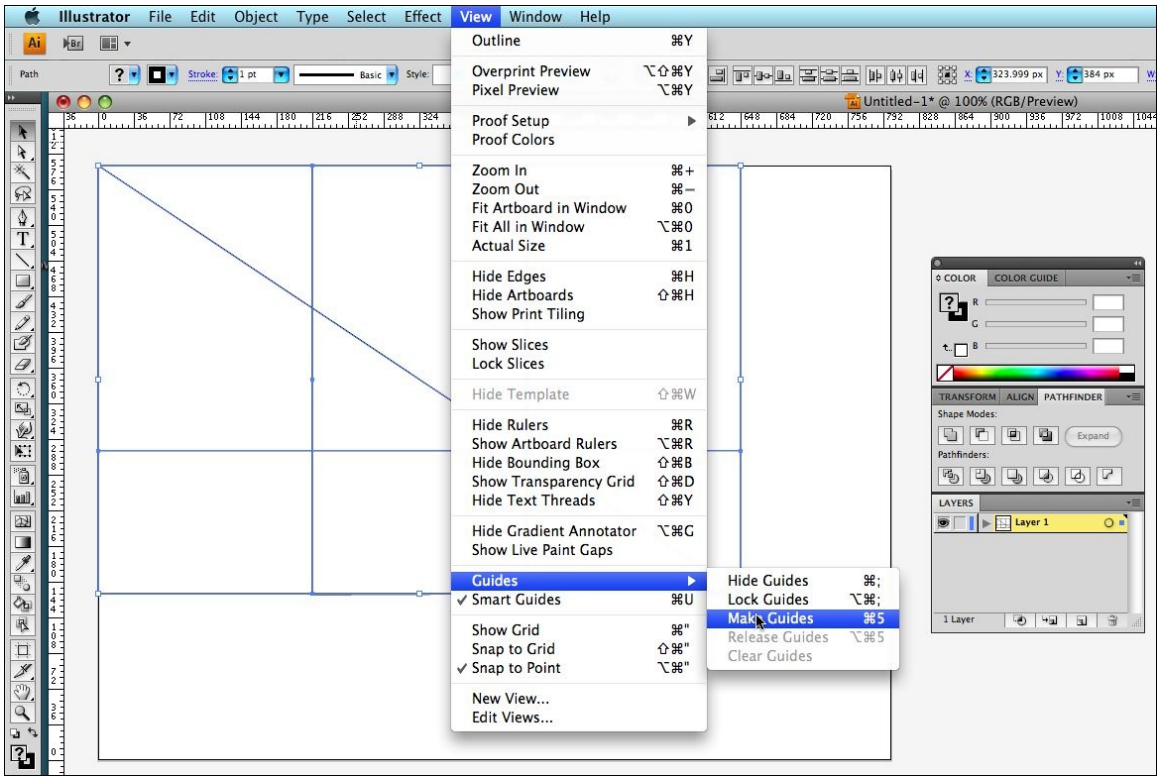
The division of thirds is very simple. A composition can be divided into thirds, both horizontally and vertically. Where those lines intersect are the areas of emphasis.

TO CREATE A GOLDEN RECTANGLE:

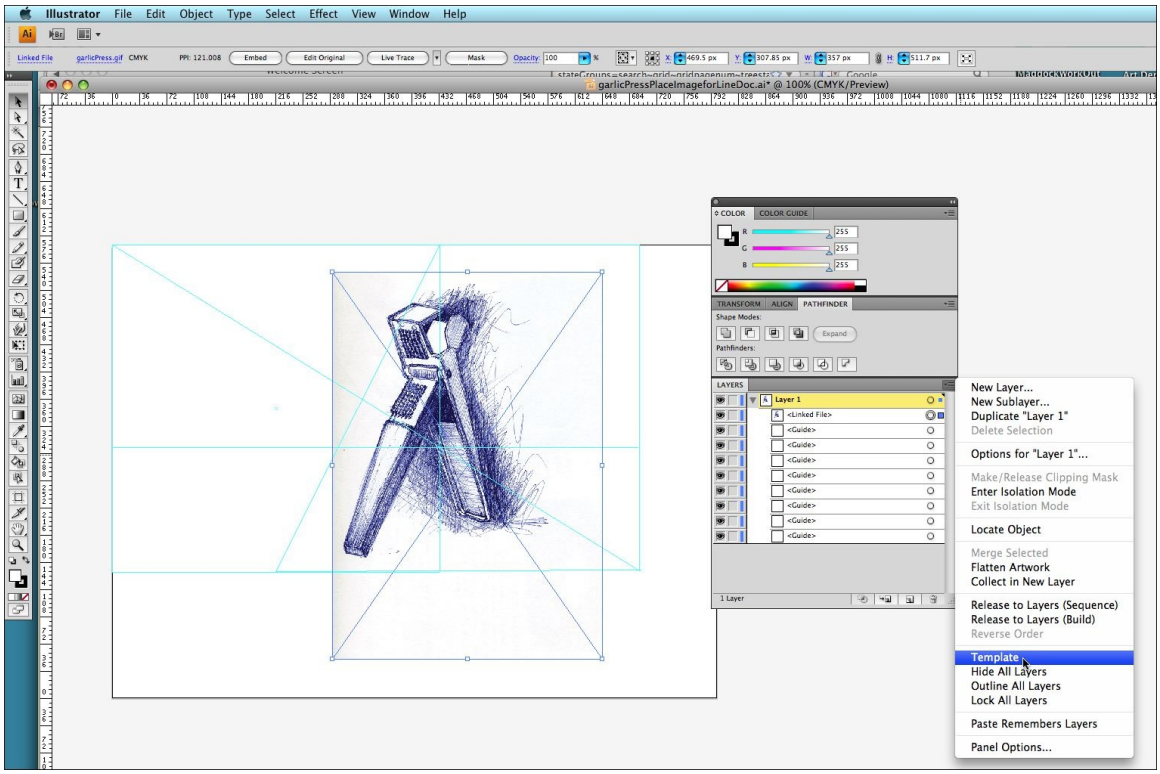
A. In Illustrator, create a square by selecting the rectangle tool, holding down the shift key and dragging to 432 pixels on the rulers guide. If you don't see the guide, go to VIEW > rulers. Select none for the fill on the rectangle. Then select the line tool and draw a line from the **center** of the bottom edge to the top right corner. The line will begin at 216 pixels. Select the rotate tool, click on the bottom edge point. Then press the option key (alt on the PC) and click and drag, outside your rectangle and drag downward until your line has rotated even with the baseline of the rectangle. Use the line tool and hold the shift key and draw from the baseline endpoint upward until you reach the top of the rectangle. Draw another straight line (hold the shift key while drawing) and complete the rectangle. Then draw a diagonal line from the bottom right corner to the top left corner. Draw a horizontal line from where that diagonal intersects the original square line. You have made a golden rectangle! Select all the lines, and go to VIEW>guides>make guides. Your lines will become guides from which you can begin your composition.

   If you choose to create the golden mean divisions of the square, you will need to create the same guides before you begin your composition. See the second set of examples above for dividing a square into the golden mean divisions.

B. Once your guides are in place, create a rectangle filled with white and stroke set to black, on top of the original guides so that you will be aware of the limits of your composition. Keep the remaining fills set at none for this project for the most part, when creating lines with the pen and pencil tools.



PLACE the scan of your chosen thumbnail into Illustrator and scale it to the size and location you believe is the best placement and scale for your composition. Turn the placed object into a template. You can choose to draw your object with the pen, pencil, or the brush tool, or all three if you want. You can build this drawing first, or later in the development of your composition. See the example of the garlic press "placed" into Illustrator (FILE > PLACE) and made into a template. I placed the press at the intersection of my diagonal guidelines with the internal square, in other words, at the division of the golden section of the rectangle. (See diagram below).


Illustrator File Edit Object Type Select Effect View Window Help
garlicPressPlaceImageforLineDoc.ai* @ 100% (CMYK/Preview)
COLOR COLOR GUIDE
TRANSFORM ALIGN PATHFINDER
LAYERS
Layer 1
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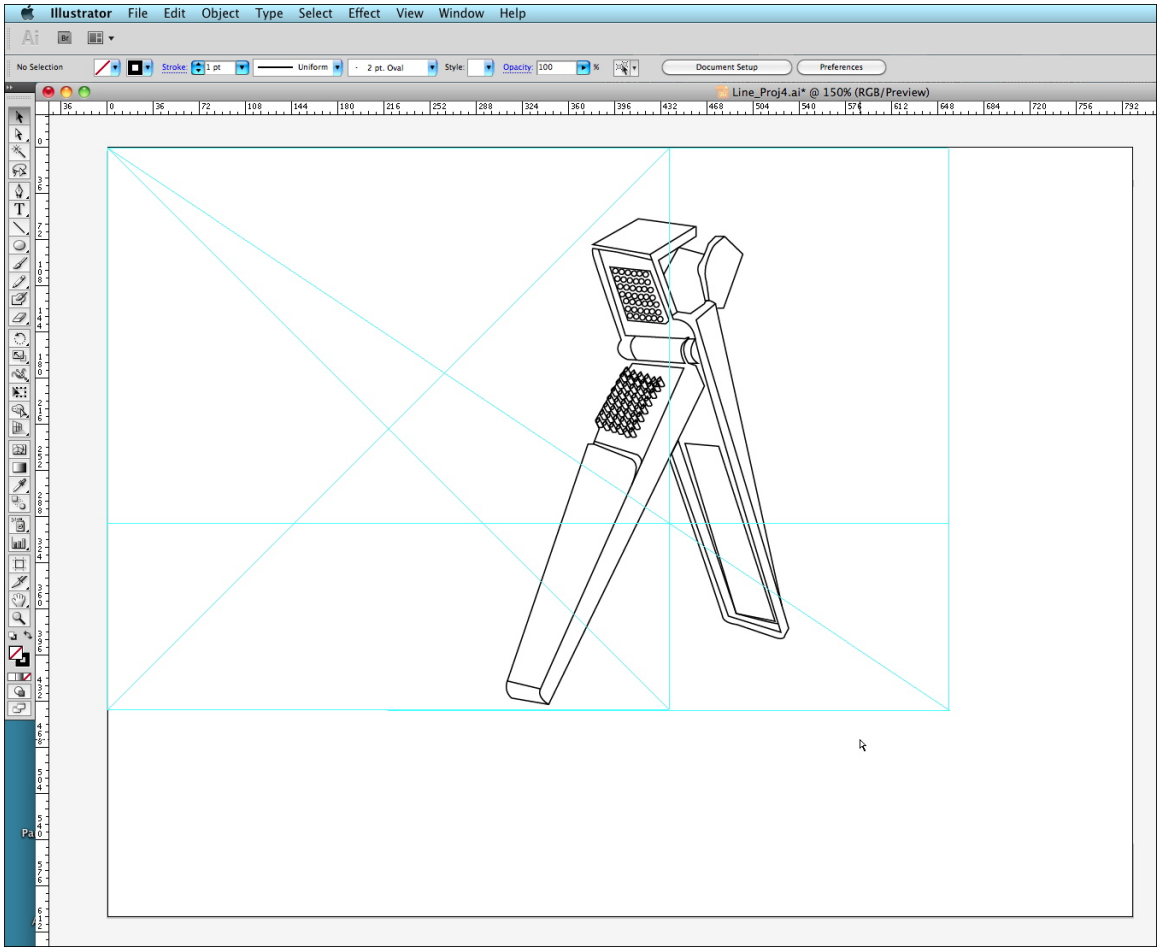
New Layer...
New Sublayer...
Duplicate "Layer 1"
Delete Selection
Options for "Layer 1"...
Make/Release Clipping Mask
Enter Isolation Mode
Exit Isolation Mode
Locate Object
Merge Selected
Flatten Artwork
Collect in New Layer
Release to Layers (Sequence)
Release to Layers (Build)
Reverse Order
Template
Hide All Layers
Outline All Layers
Lock All Layers
Paste Remembers Layers
Panel Options...


Illustrator File Edit Object Type Select Effect View Window Help
No Selection
Stroke: 1 pt
Uniform
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Document Setup
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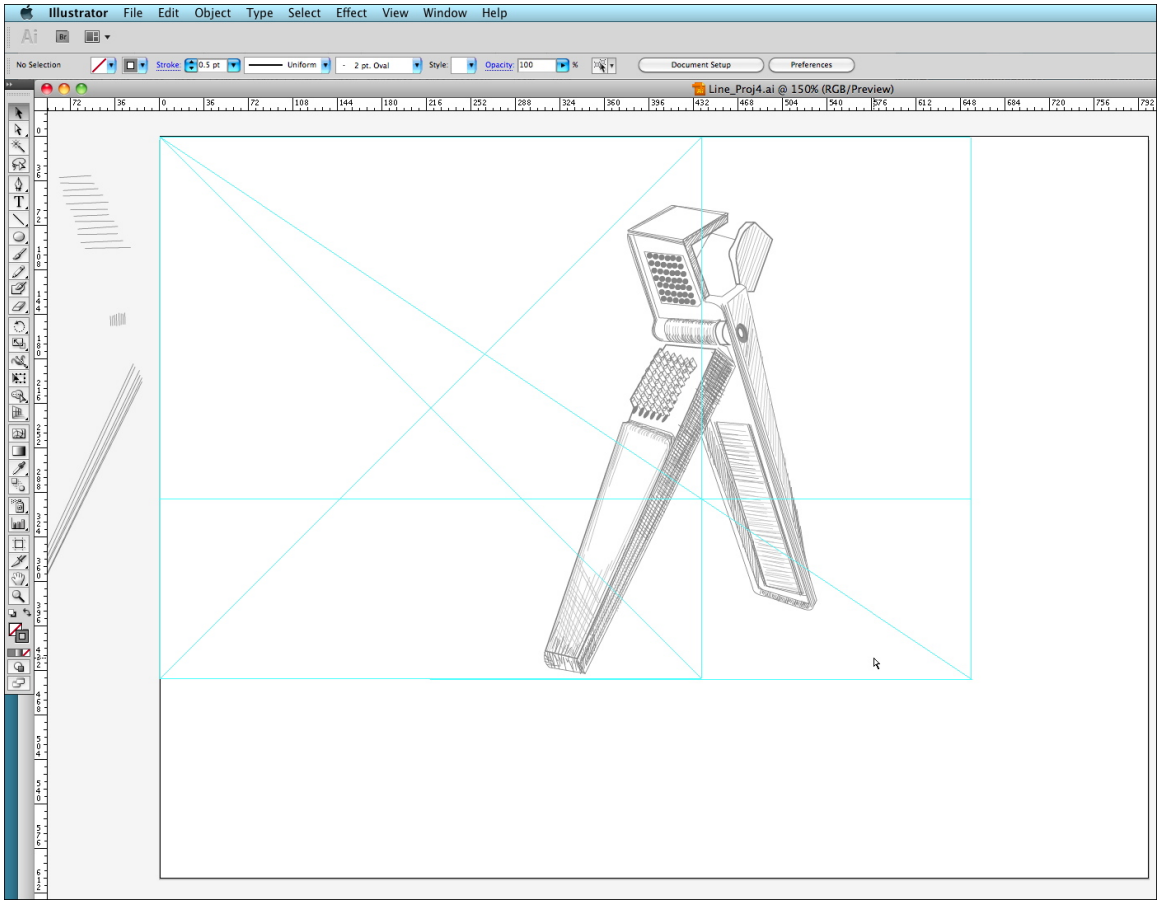
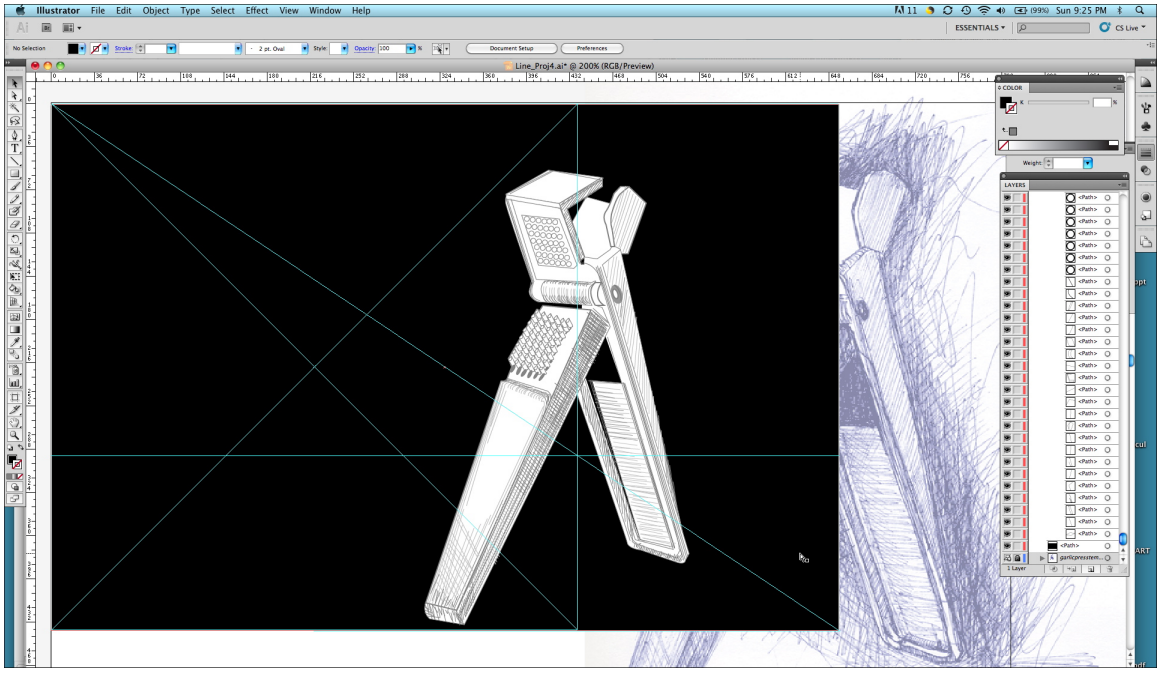
Line_Proj4.ai* @ 150% (RGB/Preview)

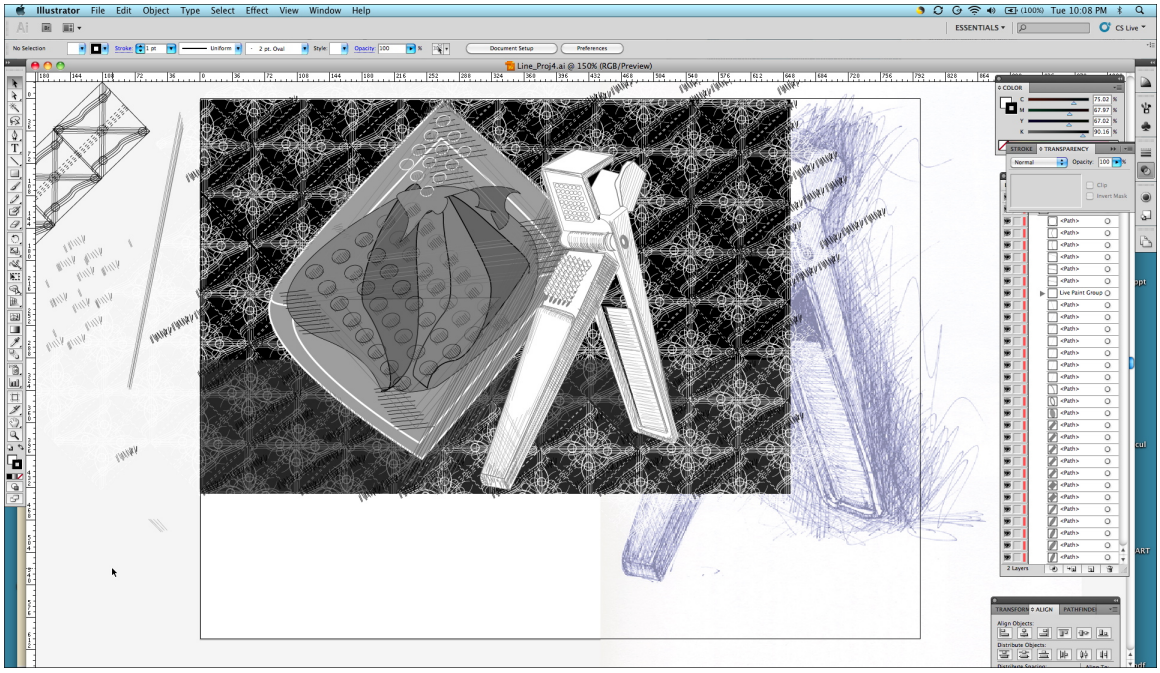
In the drawing above I have placed and scaled the garlic press and have begun drawing it with Illustrator's pen tool.



In this phase, the drawing is mostly finished with Illustrator's pen tool. I changed my strokes to middle value gray instead of black.



In this phase, I added a black rectangle to begin work on the rest of the space of the composition. You can see linear textures developing in the space outside my document.

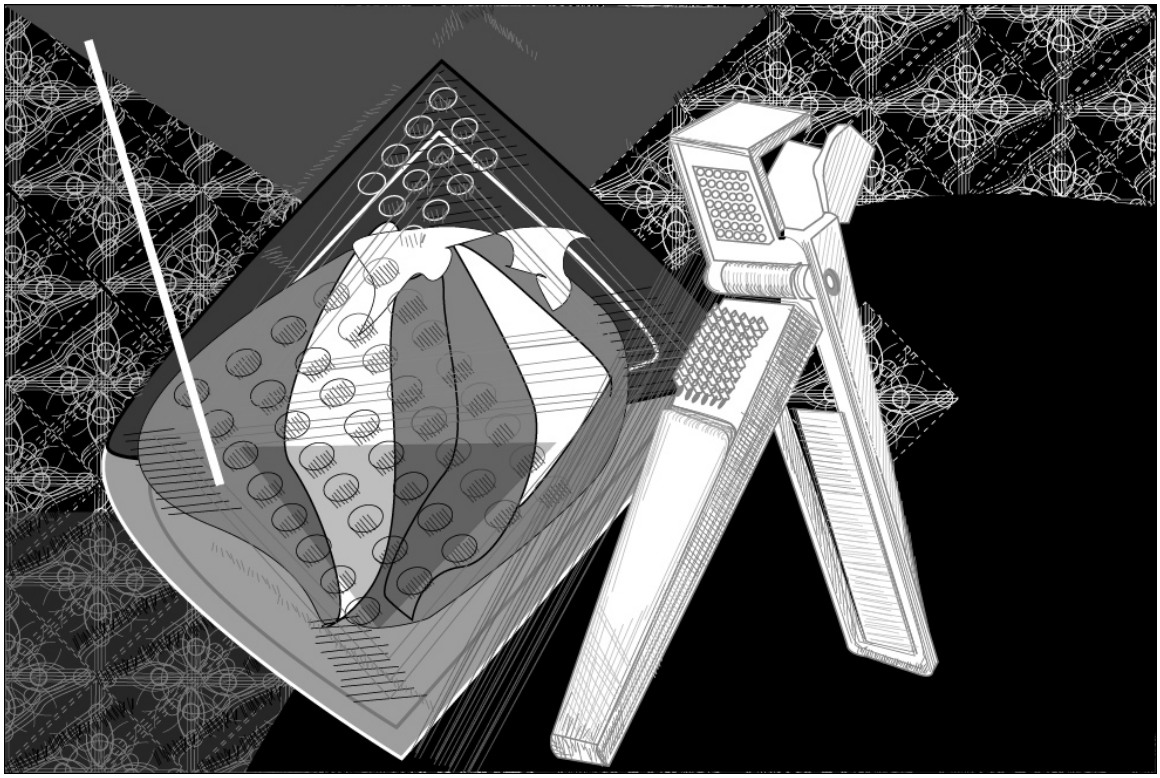


I plan to keep working with this composition. The upper region of the composition is going to have another different texture than the one you see here. (The relationship between garlic press, the stylized diagram of a garlic, and the ornate texture in the space is not working for me yet). I added a transparent shape over some of the space to break up the repetition. The void here is within the garlic press itself.

Part III. Create a shape (outlined or implied) to become a void – a shape that has NOTHING in it. The void can be whatever shape and scale you choose, but should be contained by actual or virtual (implied) lines. See student examples.

Part IV. Select a major diagonal to divide your composition in whatever fashion you choose. This line can be thick, thin, straight, curved, or implied. **DO NOT USE** the diagonal that divided the rectangle as your major diagonal. (It is not a good plan to cut a line from corner to corner in a design unless you have a pretty sophisticated sense of composition). If you do this, you will lose points. See student examples for clever diagonal divisions that are NOT based on the guideline diagonal.

Part VI. Use two **or more** line "types," but the two **dominant** types must be curvilinear and straight lines. They do not have to be used in equal quantities.



Here more shapes have been added to break up the pattern and more work completed on the 'garlic' along with a floating diagonal that repeats the press direction.

Make sure that you have only left **one** void. No other empty spaces should remain within the frame of your composition. You can add a "framework" around your composition when you finish if you choose, or simply leave a line stroke as the frame.

The entire composition will be created using the line, pen/pencil tools, brushes and shape tools in Illustrator. You may create textures of a pattern you invent **with lines**. You may have SOME shapes filled with black, of gray. Remember that LINE is the dominant element in this composition, not SHAPE. You will lose points if too much of your composition is comprised of flat or gradient filled solid tones or shapes. You can have one or more solid black shapes. It is a good idea to use black as a background upon which you create WHITE lines – as a variation on the black line on white ground that we usually see in designs.
You should plan to have one or more areas (groups) of line that appear to be overlapping others. Your object might be overlapped

by the void, or a black shape or an area contained by a certain type of line. See the Lichtenstein below for an example of this…look at how the table with the book seems to overlap the next area of a table with a guitar on it.

Roy Lichtenstein
Life with Playing Cubist Still Cards, 1974

Student examples of this project follow. Some of these works were created with pen and ink, but Illustrator can achieve much the same results when you use the brush and pen tools. The designs created with Illustrator follow the pen and ink work, starting with the dog image.

Check out the information on making or modifying brushes: (from the Illustrator Help menu)

Create a brush

For scatter and art brushes, select the artwork you want to use. For pattern brushes, you can select the artwork for the side tile, but it isn't necessary.

Click the New Brush button in the Brushes panel. Alternatively, drag the selected artwork to the Brushes panel.

Select the type of brush you want to create, and click OK.

In the Brush Options dialog box, enter a name for the brush, set brush options,

and click OK.

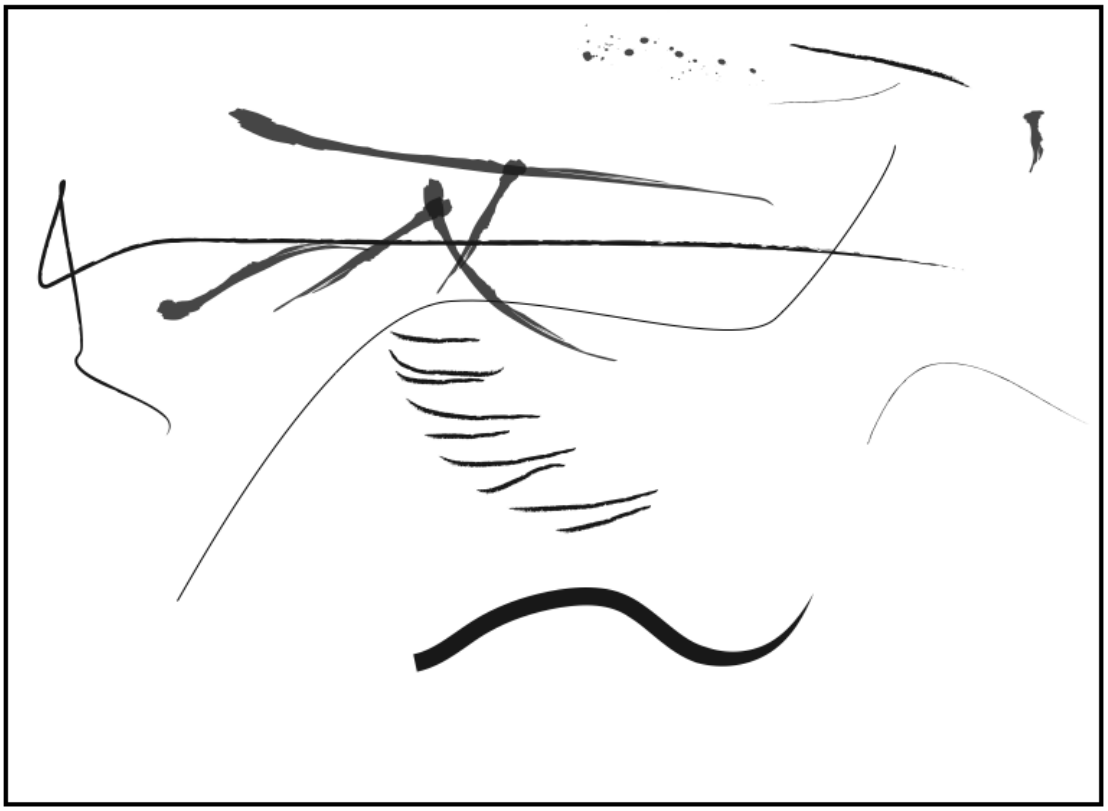
Modify a brush

To change the options for a brush, double-click the brush in the Brushes panel. Set the brush options and click OK. If the current document contains brushed paths that use the modified brush, a message appears. Click Apply To Strokes to change pre-existing strokes. Click Leave Strokes to leave pre-existing strokes unchanged, and apply the modified brush to new strokes only.

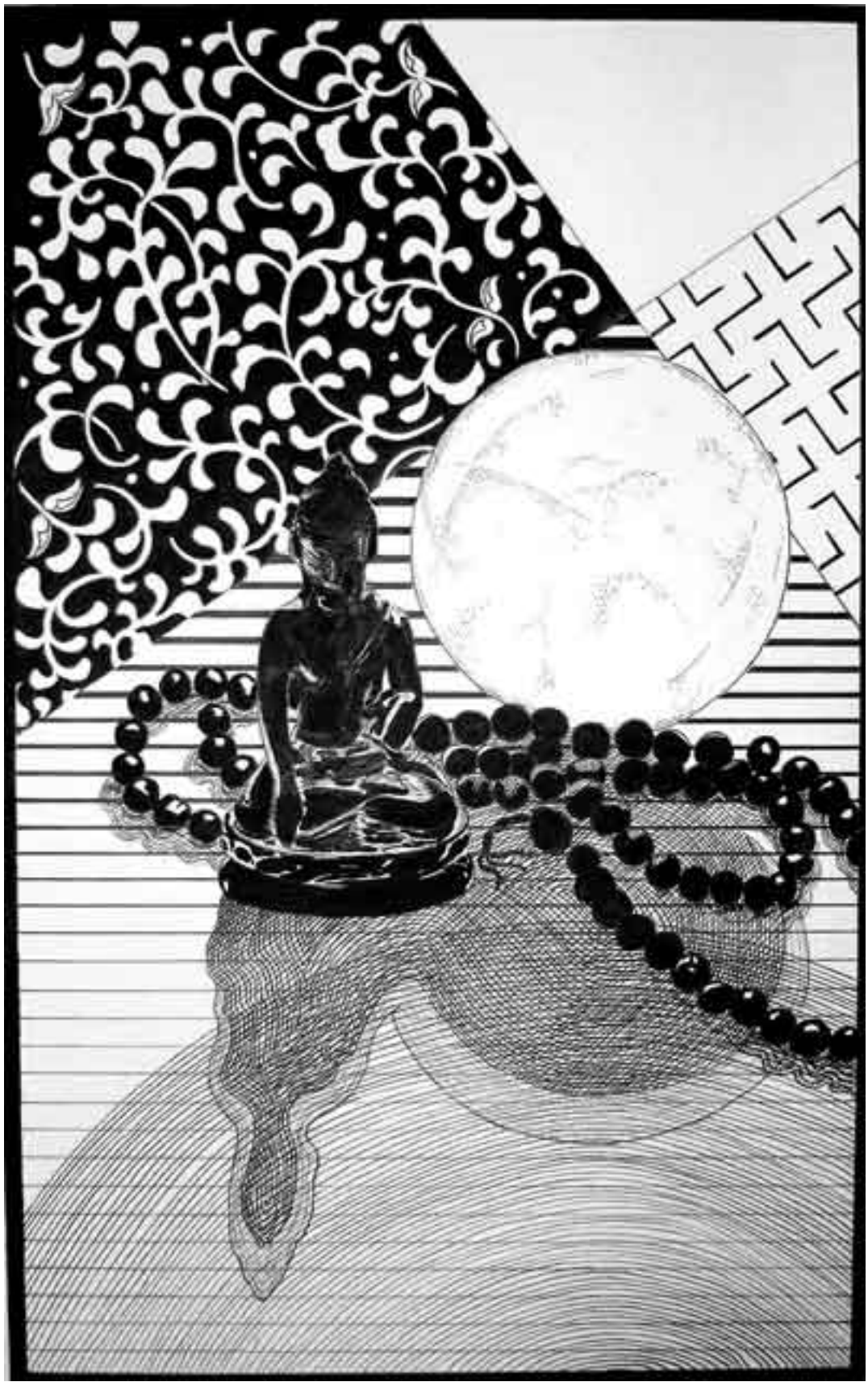
To change the artwork used by a scatter, art, or pattern brush, drag the brush into your artwork and make the changes you want. Then Alt-drag (Windows) or Option-drag (Mac OS) the modified brush onto the original brush in the Brushes panel.

To modify a brushed line without updating the corresponding brush, select the line and click the Options Of Selected Object button in the Brushes panel.

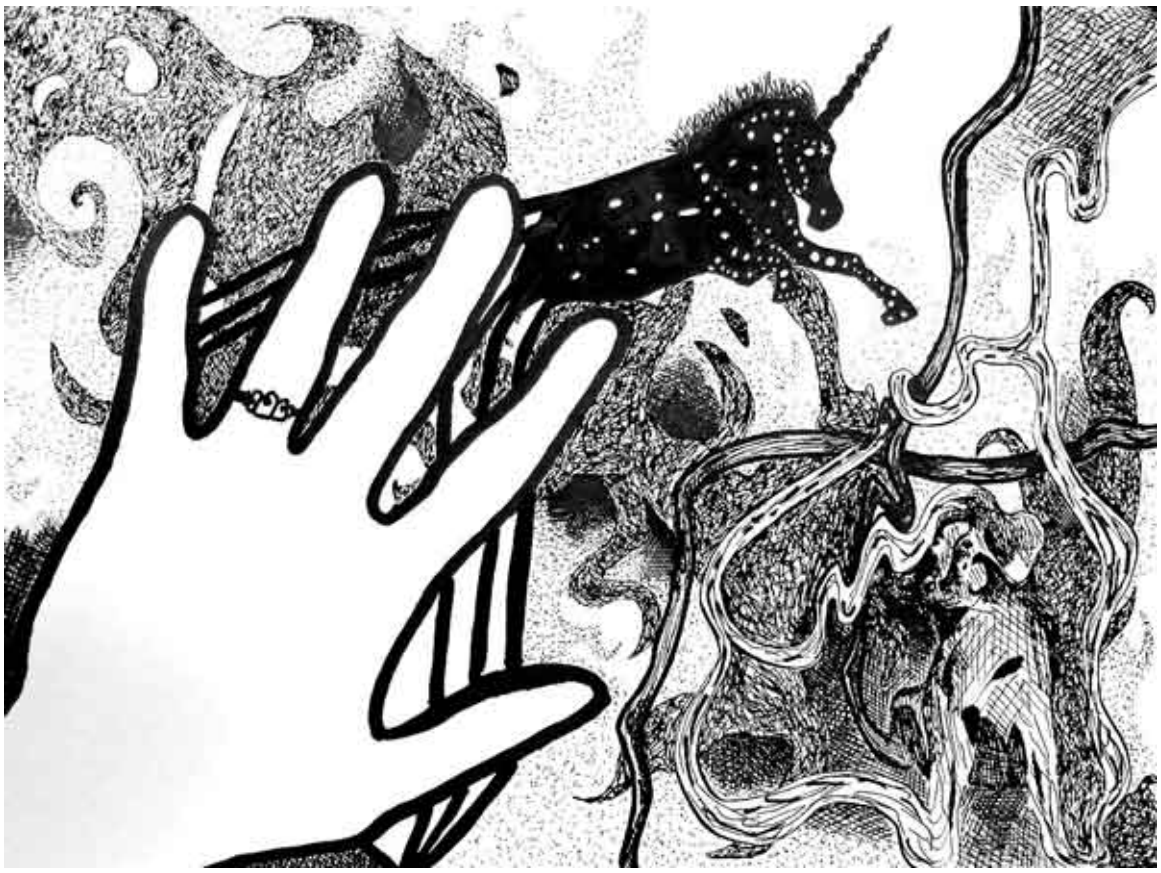
You can easily make a brush stroke that has an irregular look to a pen tool path. See the screen shot below: (The group of lines in the center reveals an "implied line."



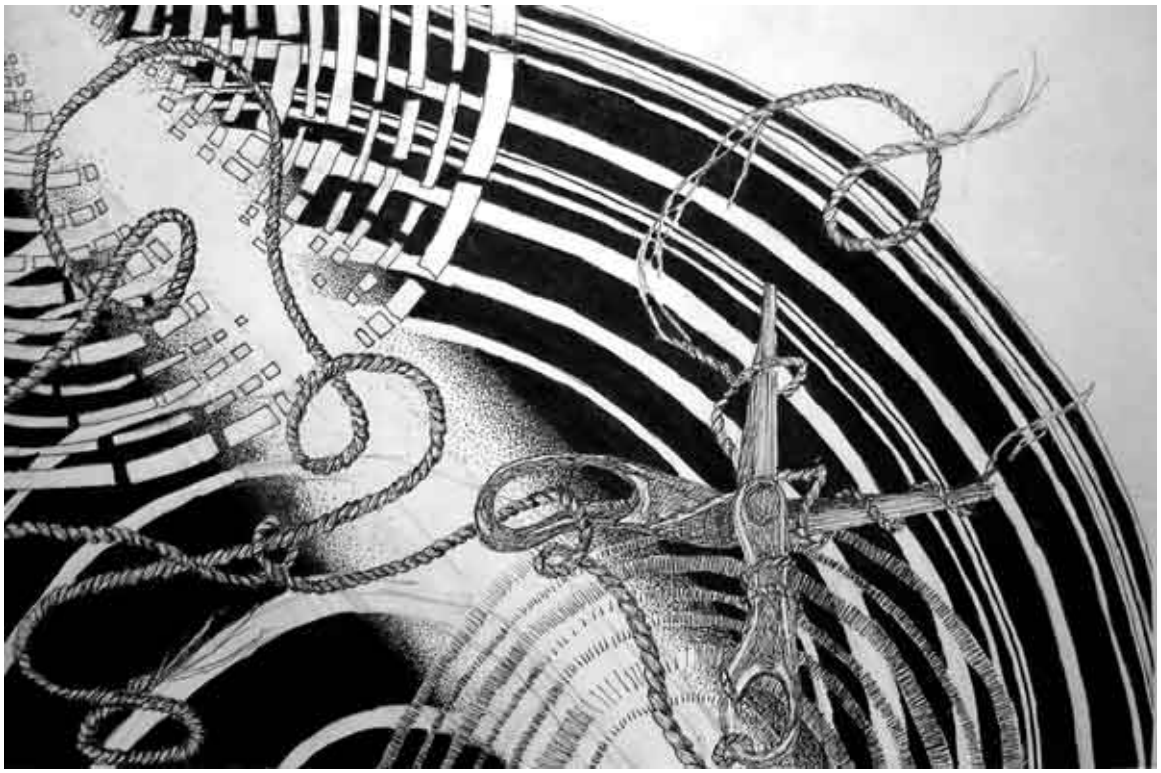
STUDENT ARTWORK – SYNERGISTIC LINE



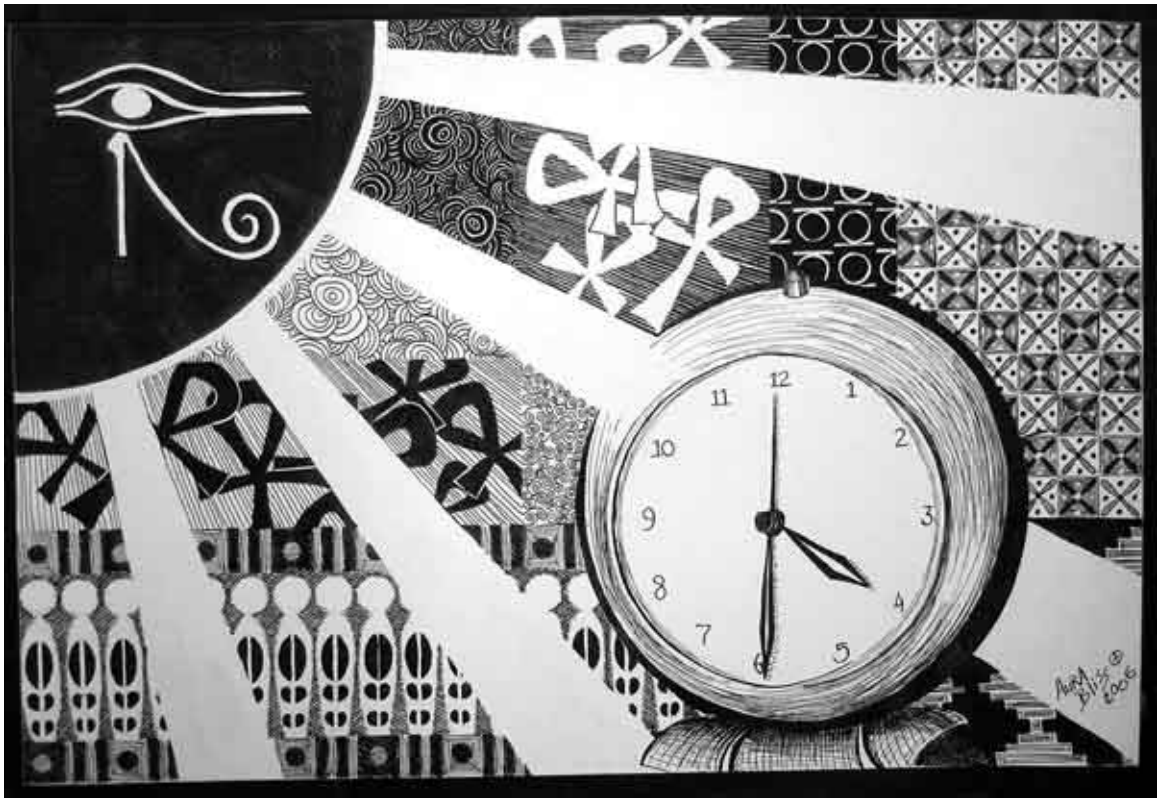
Note how straight line in this drawing can produce rich tones of gray – optically and break up the patterns from vertical to horizontal to diagonal. The artist also used a nice variety of thick and thin lines.



The void in this design is the hand itself. The scribbled short marks seem appropriate to the content of this design.



The use of curves and straight lines in the scissor design is quite beautifully conceived.

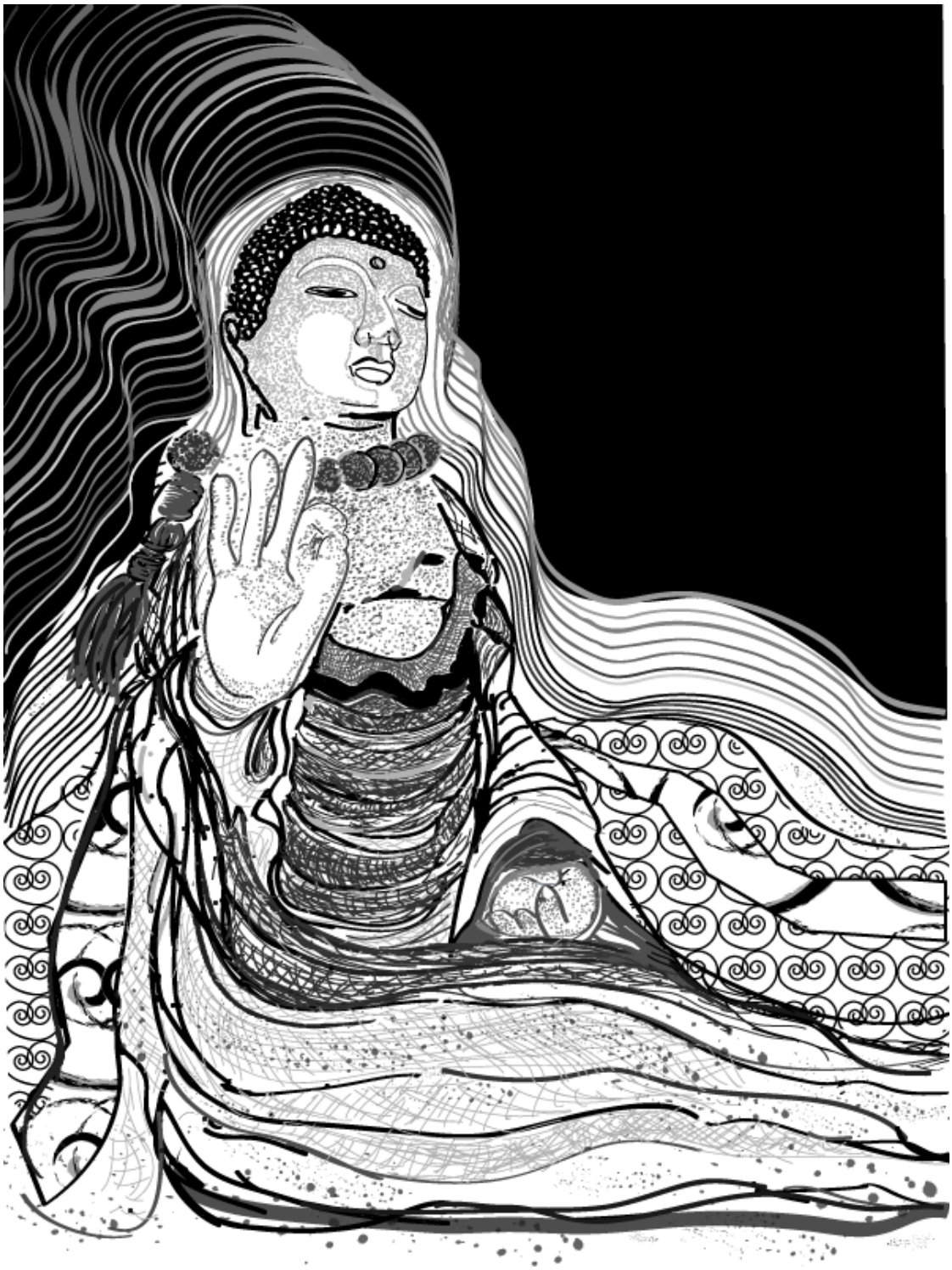


The dog image by Christine Meighan is a brilliant use of computer-aided drawing.

When your composition is complete, save as yourLastName_First Initial.ai and upload to the Dropbox>Project 4 – Line. This assignment

is worth 90 points (for a total of 100 points on the topic of Line--including thumbnails).

More student art work done in Illustrator…

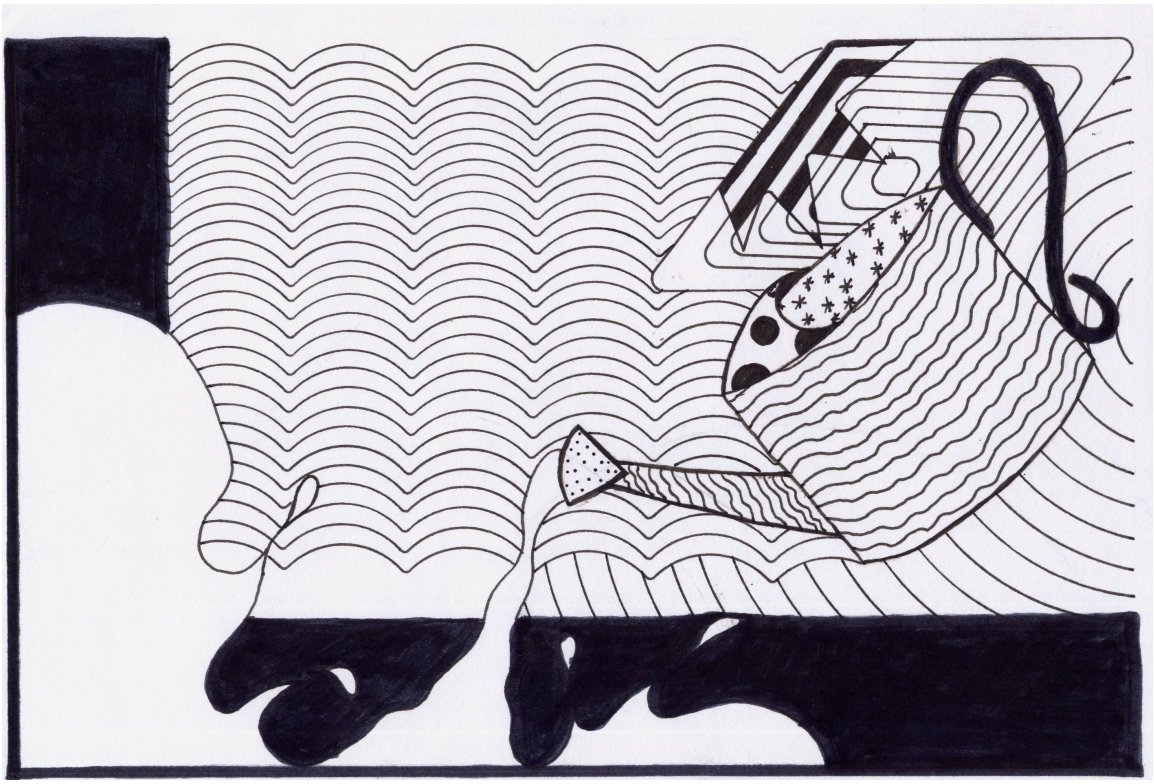


Gail Brockman

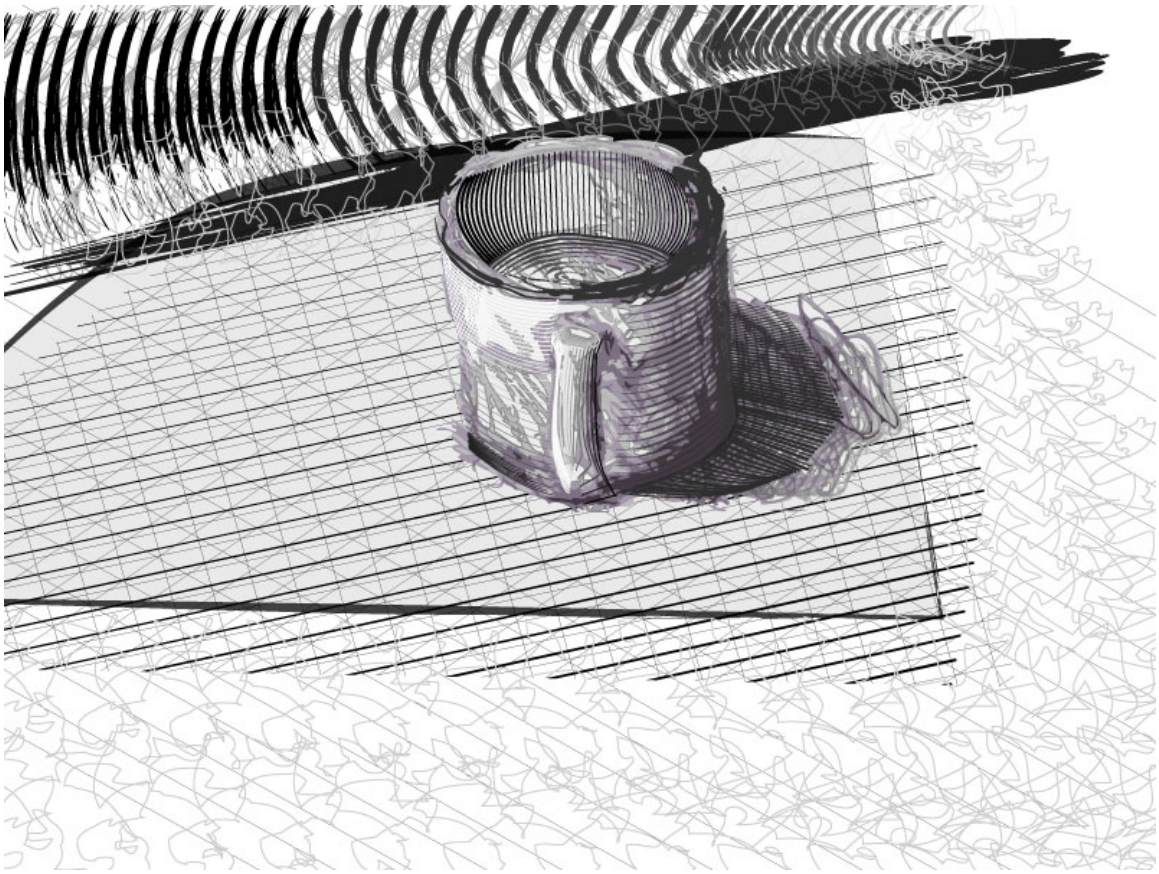
Teresa Deleon – used a lot of brush stroked paths in this design.

Roxanne Flanagan – a great use of white line on black ground and its reverse. Nice void shape also. Even her reference to feathers with the patterns she made out of lines helps reinforce her concept/idea and provides a lively variation on the balance of straight to curved line type. She only has ONE straight line and it is primary – her diagonal!

Sarah Rulon



Kim Spencer



Here is another amazing design, created on the computer, using line with almost no filled shapes. This student work is by Vasyl Benedychuk. The concept here makes me think of writing with quill feathers, grid paper, and drinking coffee. It’s a remarkably emotional drawing using only a simple still life form. We can feel the human touch throughout.