Design Fundamentals
ART 320 Online

PROJECT 7 – COLOR

Before you begin:

Make sure you remember the content in Design Basics on color, paying particular attention to the relationship of color and space. Go back to the www.wheelofcolor.com site and study the sections on color relativity, attributes, harmonies, and contrasts.
Read the Color Introduction in Content>COURSE MATERIALS> Projects 2nd Half of the Semester> Project 7 – Color.
Watch the Lynda.com movies in Illustrator Essential Training CS5, #5 on the pathfinder tool.
Watch the PowerPoint presentation on Color.

Overview

This project involves research into the design of a mandala. "Ancient symmetrical symbols, often round, found in many cultures: the rose windows of medieval cathedrals, sandpainting mandalas by Tibetan monks, sandpainting curing ceremonies by Navajo healers, doorstep decorations in colored rice put out daily by Indian women. Mandalas are a symbol of the self, the soul, going to the center. In this way, they are related also to labyrinths." *(from the Mariposa Museum and Culture Center, history and definition of Mandalas).*

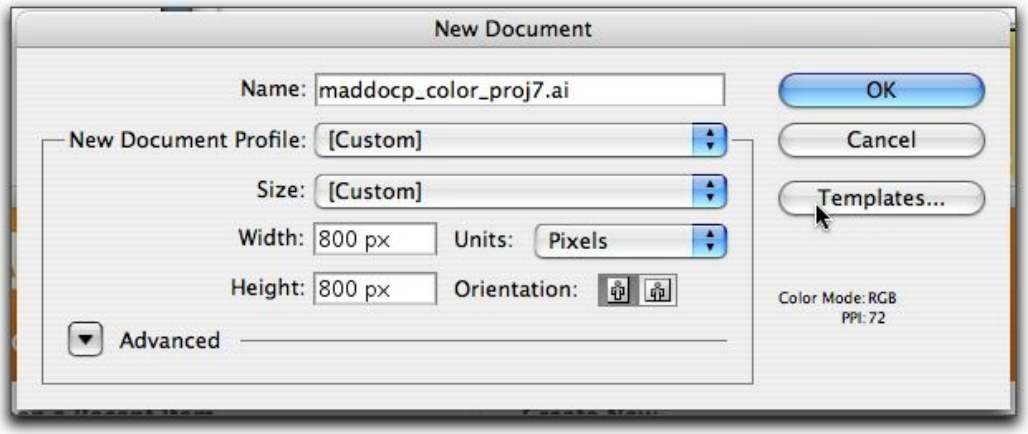
The purpose of using this design motif is its radial nature and frequent sense of illumination (it is not meant to be a spiritual concept despite having been used for such in many cultures). You will be making a radial design as the underlying structure for your final composition. Adobe Illustrator will be your software tool.

Objectives

You will develop a deeper understanding of the possibilities of radial design. You will also be creating a design that uses a progression in value and saturation. Using a color system based upon theory from class discussions and lectures on color theory, you will learn how to use color to suggest depth, light, shadow, and in the best instance, luminosity. The finished product could be an elaborate color wheel that will be a useful color source in future art studies.

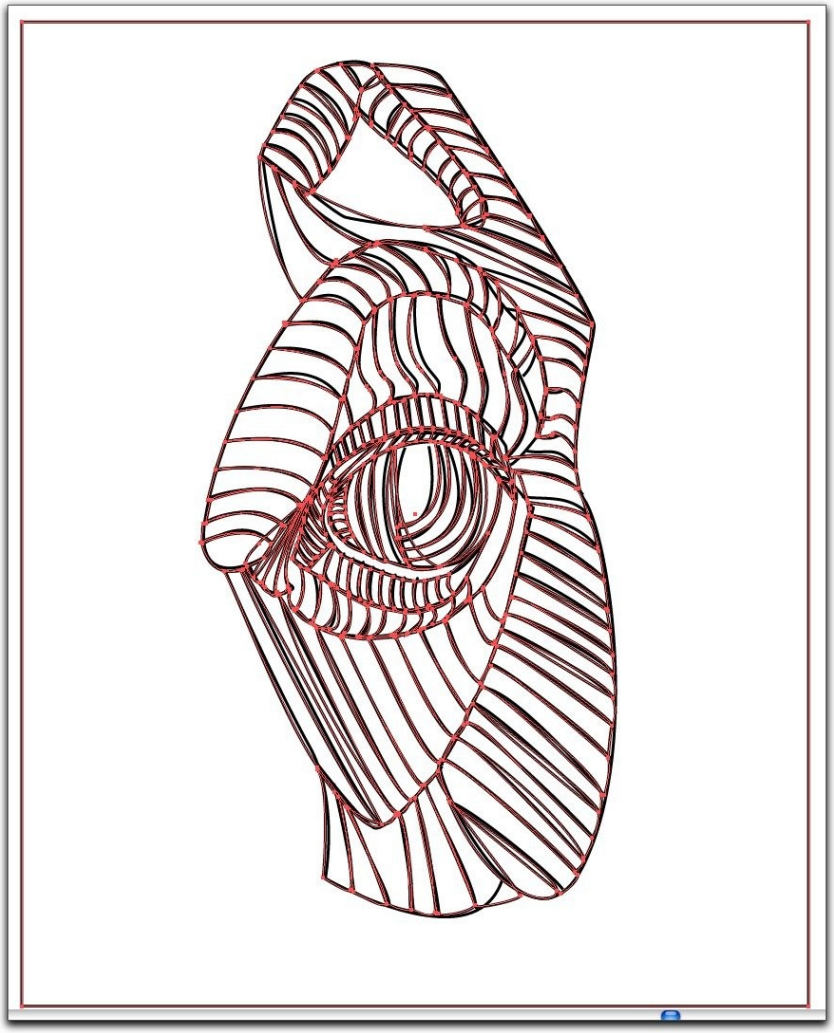
Process

Begin by creating a square format document in Illustrator.

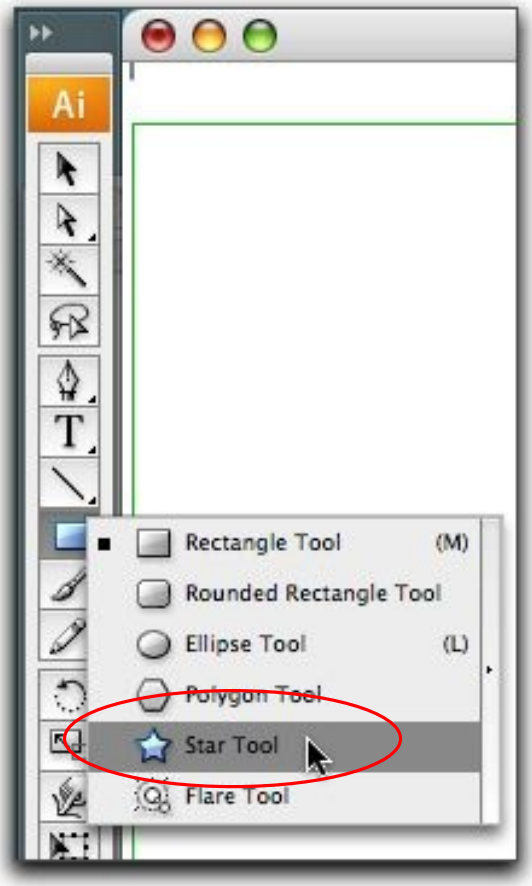


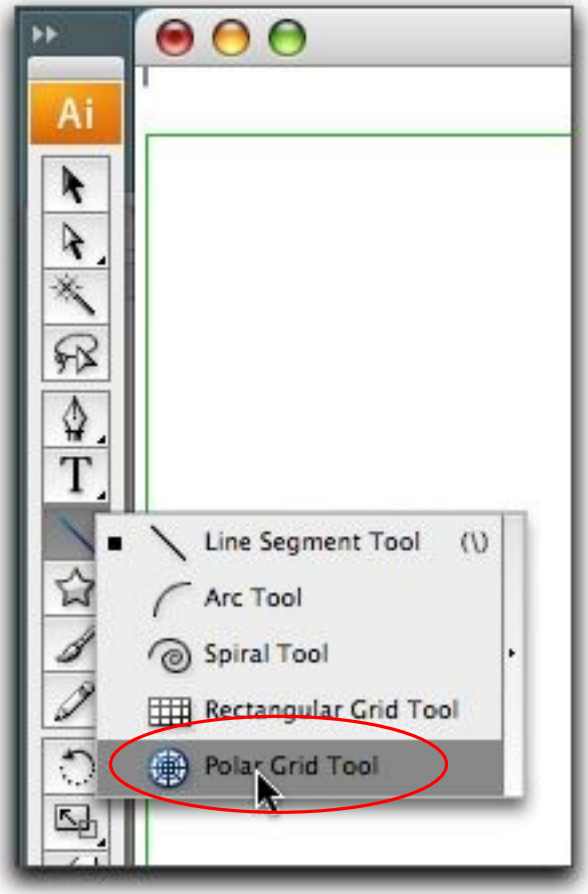
To get started you can develop your design directly on the computer, or you can design a drawing first and scan it, and bring it into Illustrator as a template. See the diagram on the next page. I made a horse's eye and brought it in as template. I used the pen tool and traced over it to create the closed shapes in Illustrator that I will now be able to fill. I could have done a live trace of my design and then turned it into a live paint group for easy color fills from the CMYK panel.

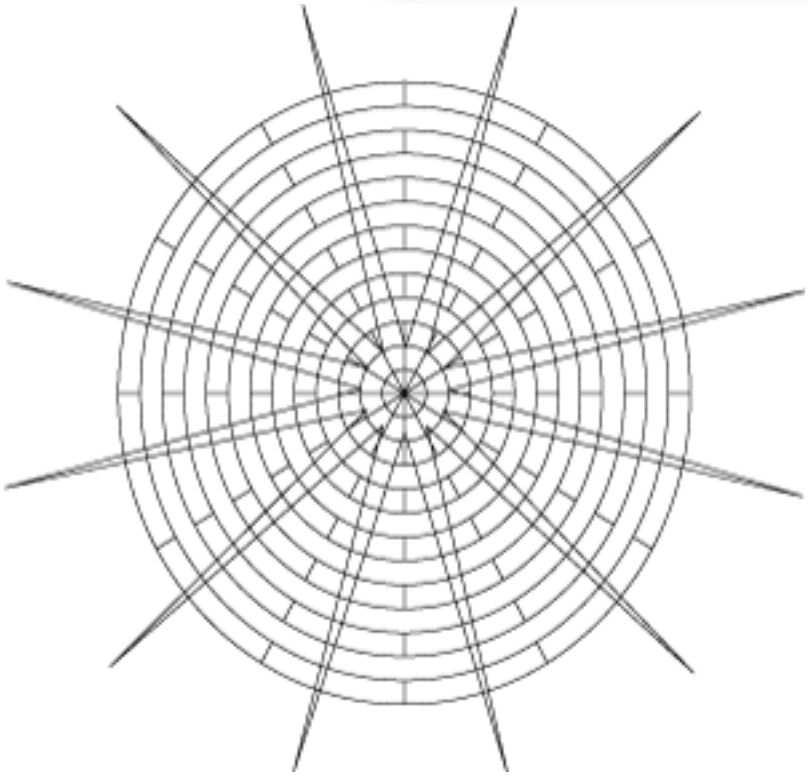
For this assignment you can also use the Star tool and the Polar Grid tool to create a symmetrical mandala with the required divisions to be specified in the parameters of the assignment. I made the horse eye with the intention of using it as a one twelfth region of my finished mandala.



The tools that you might try using in Illustrator, directly, are called the star and the polar grid. If you double click on **the polar grid**, you can set the specifications for the grid. The **star** can be made using that tool, and holding down the command Mac (control on PC) key will allow the star to have deeper or shallower points. While holding down the mouse and dragging, you can also push the arrow keys to set the number of points on the star. While the mouse is still down, you can push the spacebar and move the object by dragging. Practice these moves on the computer until you get a couple of star shapes you like.

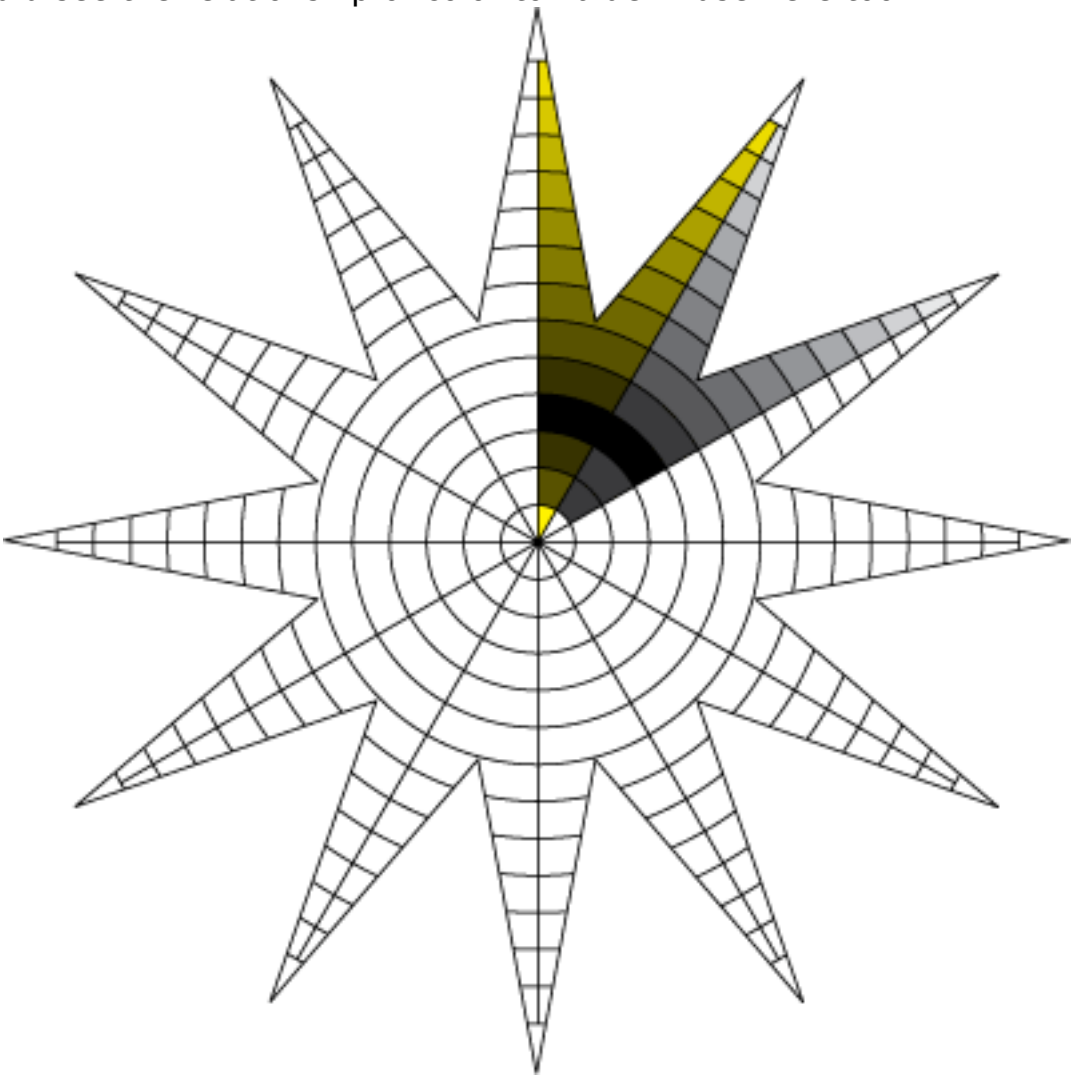

Ai
Rectangle Tool (M)
Rounded Rectangle Tool
Ellipse Tool (L)
Polygon Tool
Star Tool
Flare Tool


Ai
Line Segment Tool (\)
Arc Tool
Spiral Tool
Rectangular Grid Tool
Polar Grid Tool



The preceding diagram is a combined **star** and **polar grid** object. Both were created, selected, and then **divided** with the **Pathfinder Panel**. Select all your objects and use the pathfinder palette (**Window>Pathfinder**) and chose "**divide**" to create paths that can be filled with color using the direct selection arrow (A). Sometimes the divide operation does not create completely distinct shapes. (I have had to re-create some of those sections individually on top of the shapes that did not divide).

The next image is a similar object with color starting to be applied in an order like a gradient, or what is called **graded order**. This gives the object the appearance of light and shadow or mass.
It also enhances luminosity, which is another aspect of the assignment. I also placed a series of gray tones in the image so you could see the relationship of color to value in use here too.

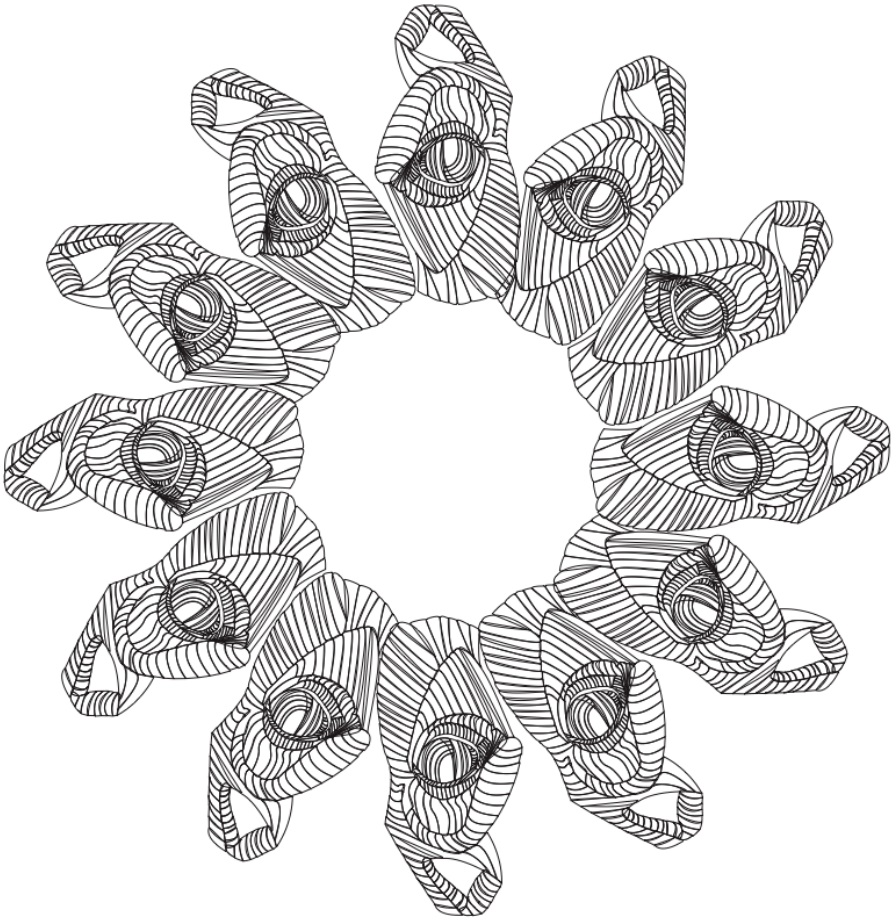


Proceed to fill all your shapes with color. You can choose if you want to have an outline stoke or none. I prefer none, but used one on the horse eye design. This allows the color to have the subtlest effect of blending and gradation. A dark outline will allow the colors to seem more distinct and luminous, but will also prevent much simultaneous contrast interaction. **I want you to use only solid fills in this project, and no gradations. You will lose points if you use gradients.** You will learn to create the "appearance" of a blend with flat color.

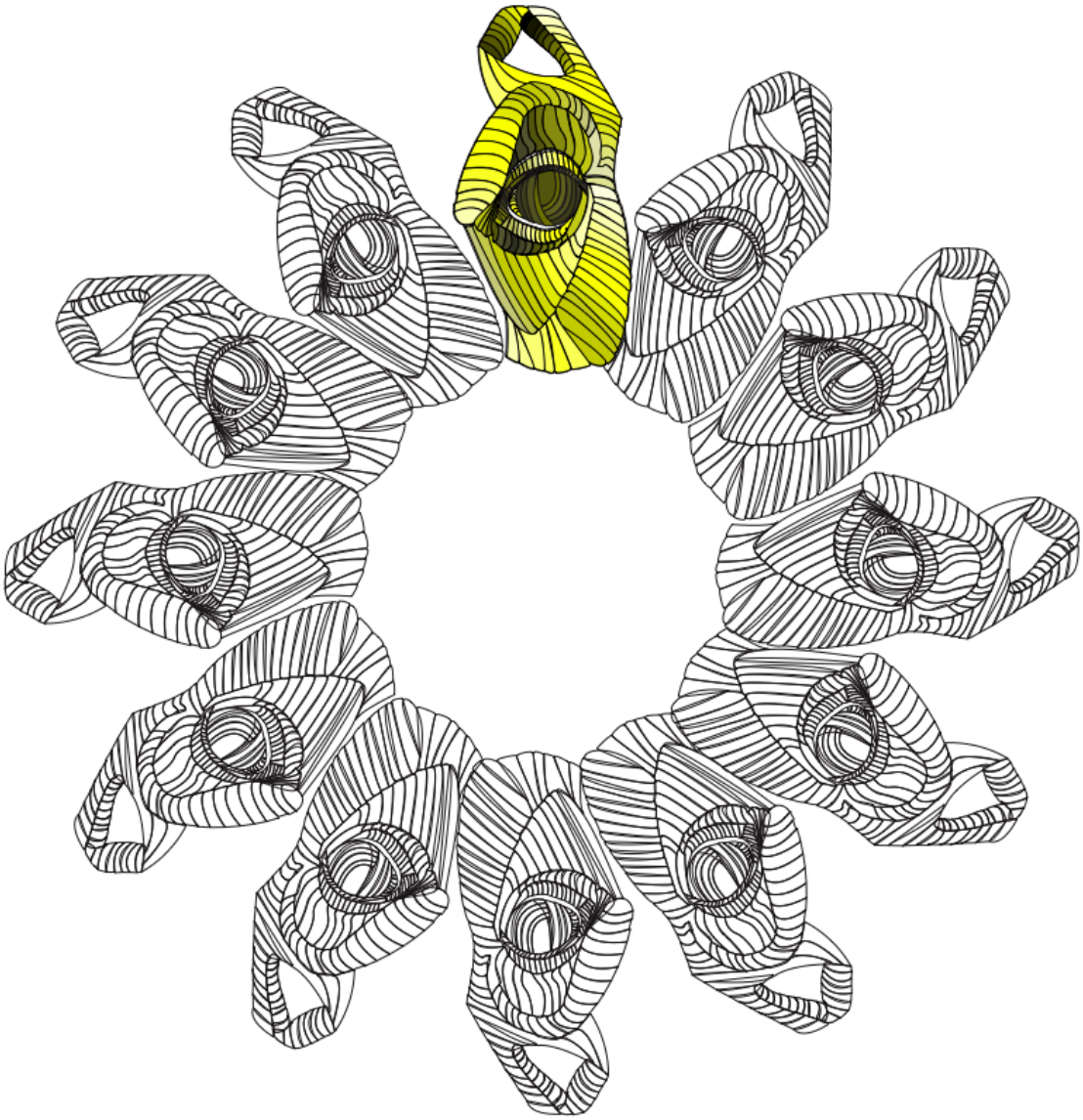
It is up to you how you place color in your design. Working in spectral order is desirable, but not mandatory. You will need to place color in graded order (or as a progression) and you will be expected to use **tints, tones and shades** of each hue in the **color wheel (12 in all)** in your design. Think about a color to serve as the background for your design. This is where you CAN use a gradient if you wish. White might not be the best solution for this project.

Another way to proceed in this assignment is to begin with a completely drawn out series of shapes that will become 1/12 of a slice of the overall design. Copy it 11 more times until you have the complete radial composition. This was my intention with the horse's eye design. I will fill that image using all 12 hues of the color wheel, arranged as a series of colors in graded order within each section. The image below is a representation of that design ready for the addition

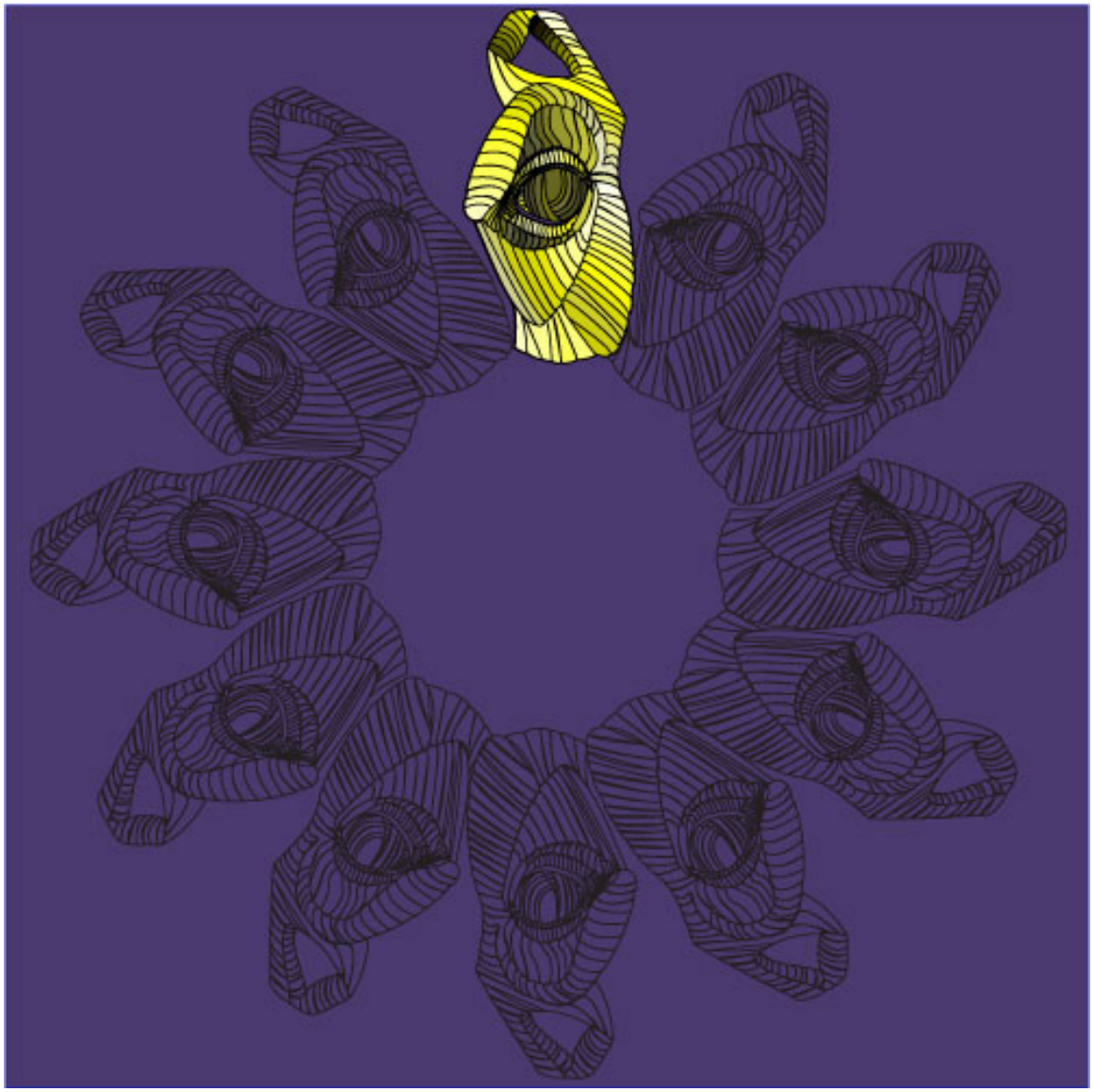
of the 12 hues, their tints, tones and shades.



This is the first hue to be inserted, yellow with variations in graded order of tints, tones and shades. I left the stroke around the shapes to assist in the illusion of the form. I will change the stroke to a lighter neutral instead of black in the finished design.

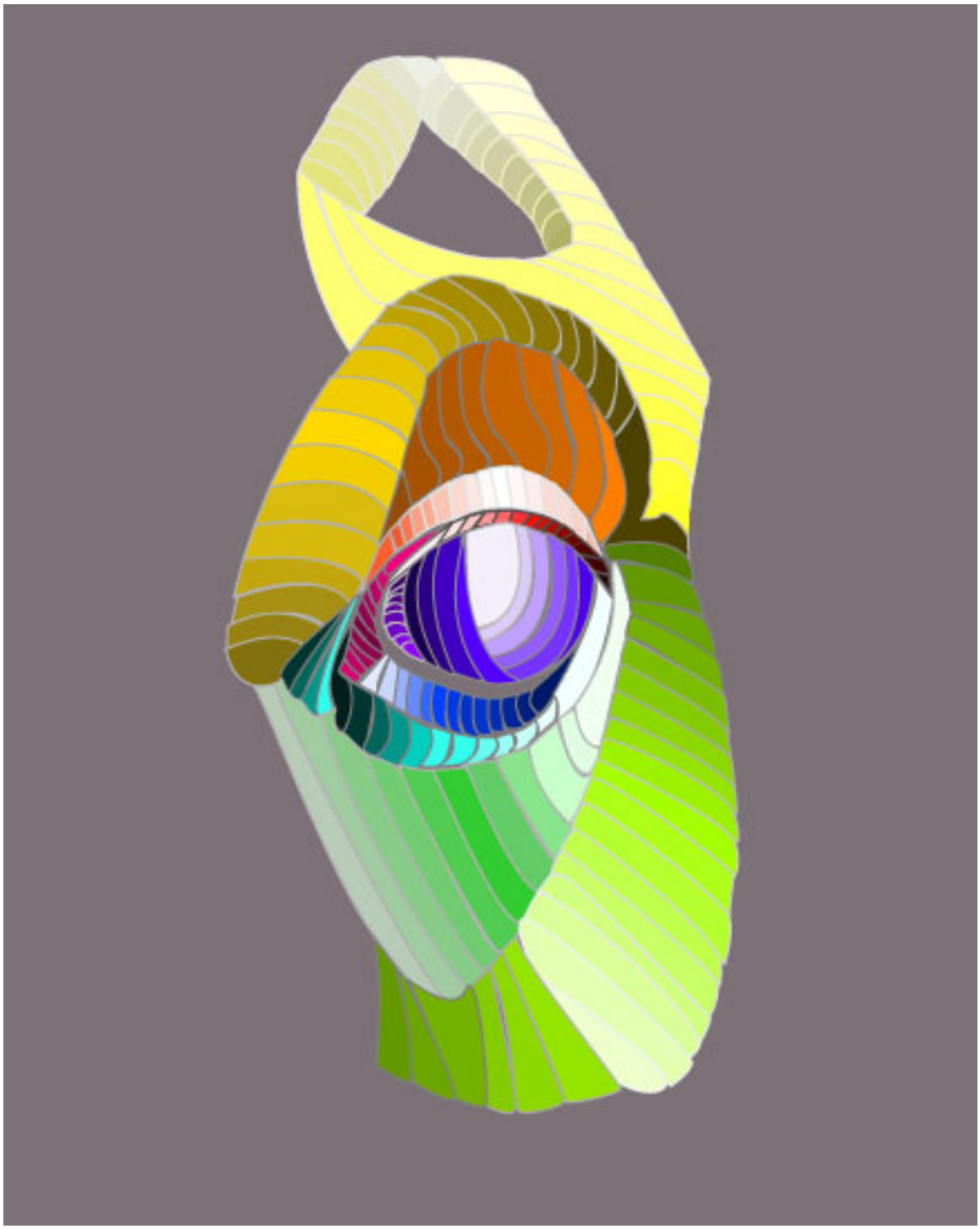


To complete the design, I would need to fill the other eleven eye shapes with each hue of the color wheel. In the final version, I will create a background rectangle to aid in the creation of luminosity, instead of leaving the space white. See the design below.

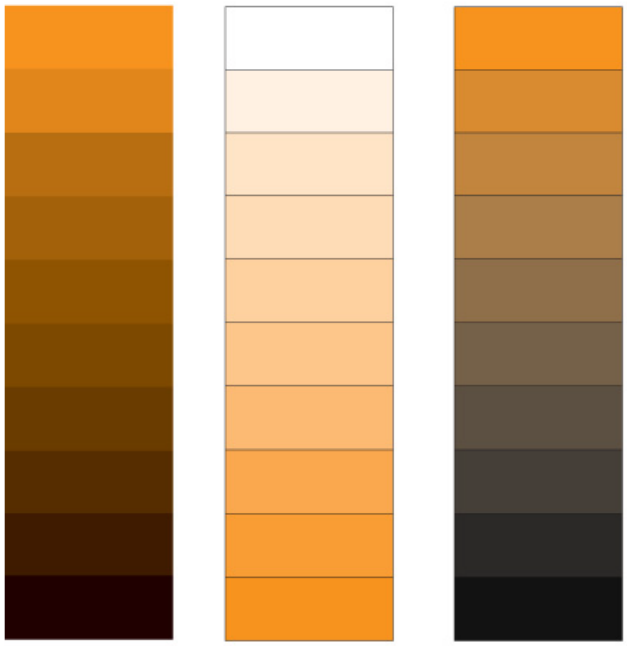


I used the align palette in Illustrator to keep the images balanced symmetrically and used the rotate tool (double click it to set the amount of rotation) to place each image into a 30 degree relationship to the overall circular design motif. That allowed for 12 evenly spaced images on the circle.

Here is a 12 hue version of the horse eye with a single shape instead of the symmetrical mandala. This is an option you may wish to use in this assignment as long as each hue and its tints, tones, and shades are represented. You do not have to create an EQUAL balance of colors. What are the dominant colors in this design?



Make sure you watched movies about the color palettes in Illustrator, and the Swatches palette. This knowledge will make your color selecting process much simpler. I chose to work in CMYK mode for the single eye composition. Remember that CMYK is a process color mode and will help your final image more closely resemble how it would look printed. RGB mode has a greater gamut (range of visible colors) and is suitable for web work only. I don't find that mode easy to create tints, tones and shades within, however. The HSB mode can easily create the colors also in subtractive color mixing, as can the CMYK mode. The following diagram shows some formulas for finding the twelve hues in CMYK mode. It says to use the HSB mode for tones, but I find it just as easy to use CMYK and move the hue sliders to the left (adding white) and simultaneously move the K slider from 0 to something% to add black – thus, creating a tone.



For developing shades, tints, and tones in CMYK and HSB:

Tints - create a shape filled with WHITE. Then add the hue in percentages, starting at 100% and drop downward to the desired low percentage. If you hold down the shift key and select the top slider, both sliders will move simultaneously (in CMYK) when a hue requires two sliders to be moved in tandem.
Shades - create the shape filled with BLACK and repeat the same as with tints. (in CMYK)
Tones - Use HSB, and select the pure hue first. Then move the H and B sliders in equal ratios from right to left to create the desired tones.

Begin with the full strength hue selected, then move the sliders to the left to desaturate the hue.
To mix the 12 hue subtracton wheel in CMYK:

Red = OC, 100M, 100Y, 0K
Orange = 0C, 50M, 100Y, 0K
y-g = 25C, 0M, 100Y, 0K
B-G = 100C, 0M, 0Y, 0K
BV = 75C, 100M, 0Y, 0K
R-V = 0C, 100M, 0Y, 0K
y-o = 0C, 25M, 100Y, 0K

R-O = 0C, 75M, 100Y, 0K
Yellow = 0C, 0M, 100Y, 0K
green = 50C, 0M, 100Y, 0K
Blue = 100C, 50M, 0Y, 0K
Violet = 50C, 100M, 0Y, 0K

When you complete the color project, upload it to the **Dropbox>Project 7 – Color.** It is worth 100 points.
Save the project as yourLastNameFirstInitial_proj7.ai and upload.
Project 7 also has a quiz. I will make the quiz available beginning the 1st week of the color assignment. It is worth 10 points. The quiz can be found in **QUIZZES** link.

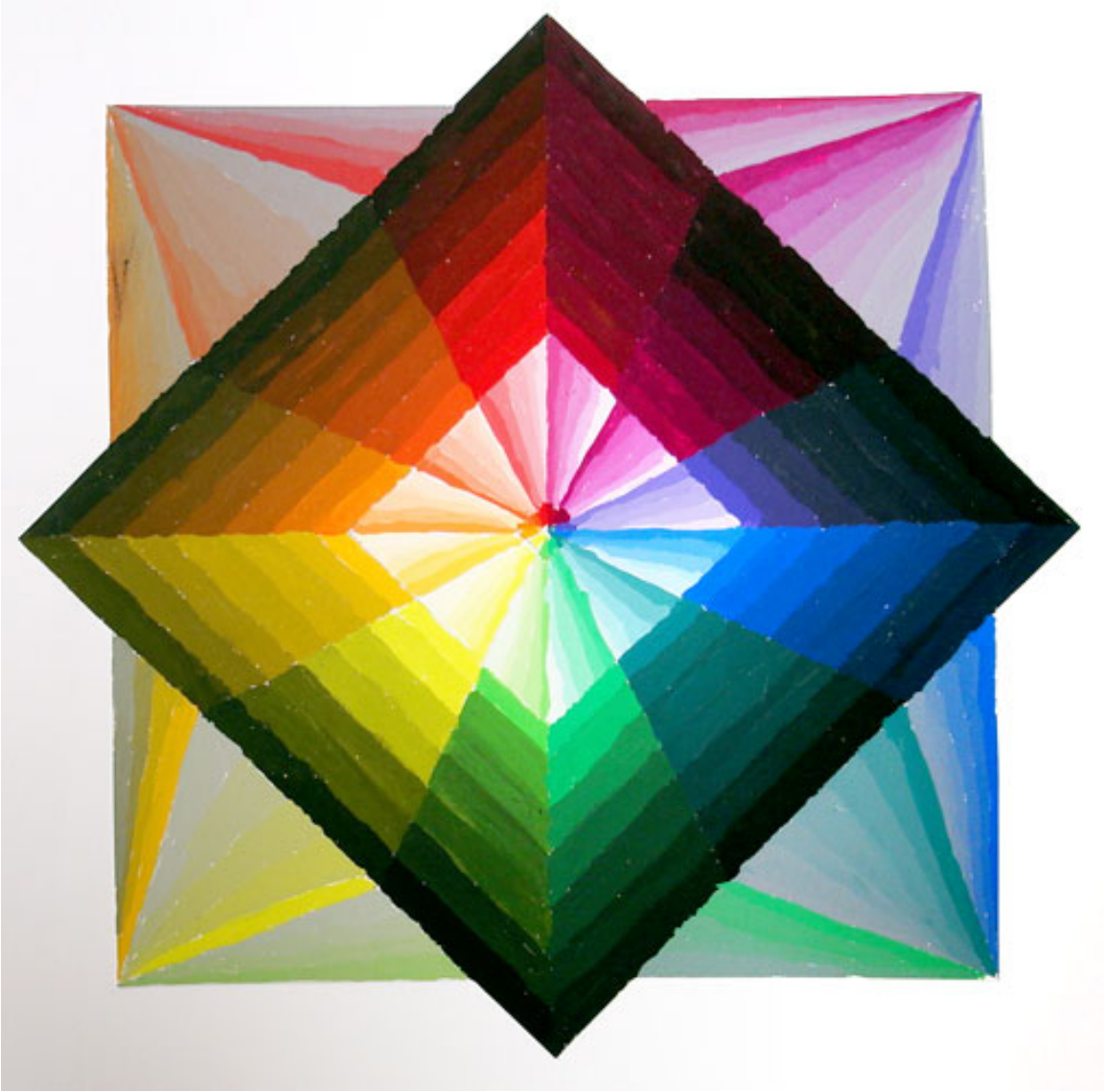
Below are examples of student works (the first ones are made with paint, not digitally) that mostly meet the criteria of this assignment- using flat color, graded order, all 12 hues, tints, tones and shades. All of these designs were assembled without regard to symmetry, but all have radial design.

Ashley, Color final

Helen Cummings, Color Final

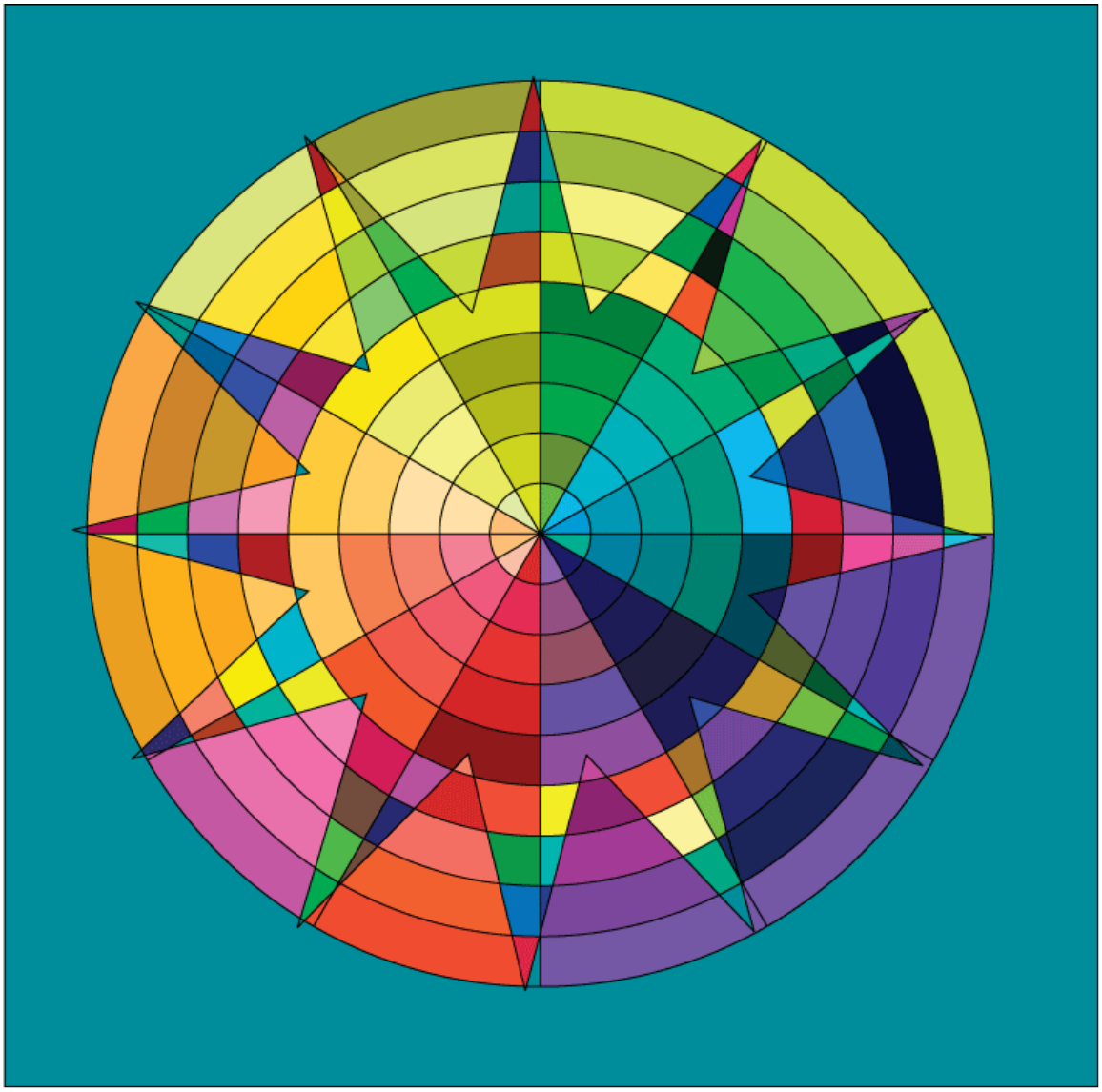
Color Final

Dannin Stark, Color Final

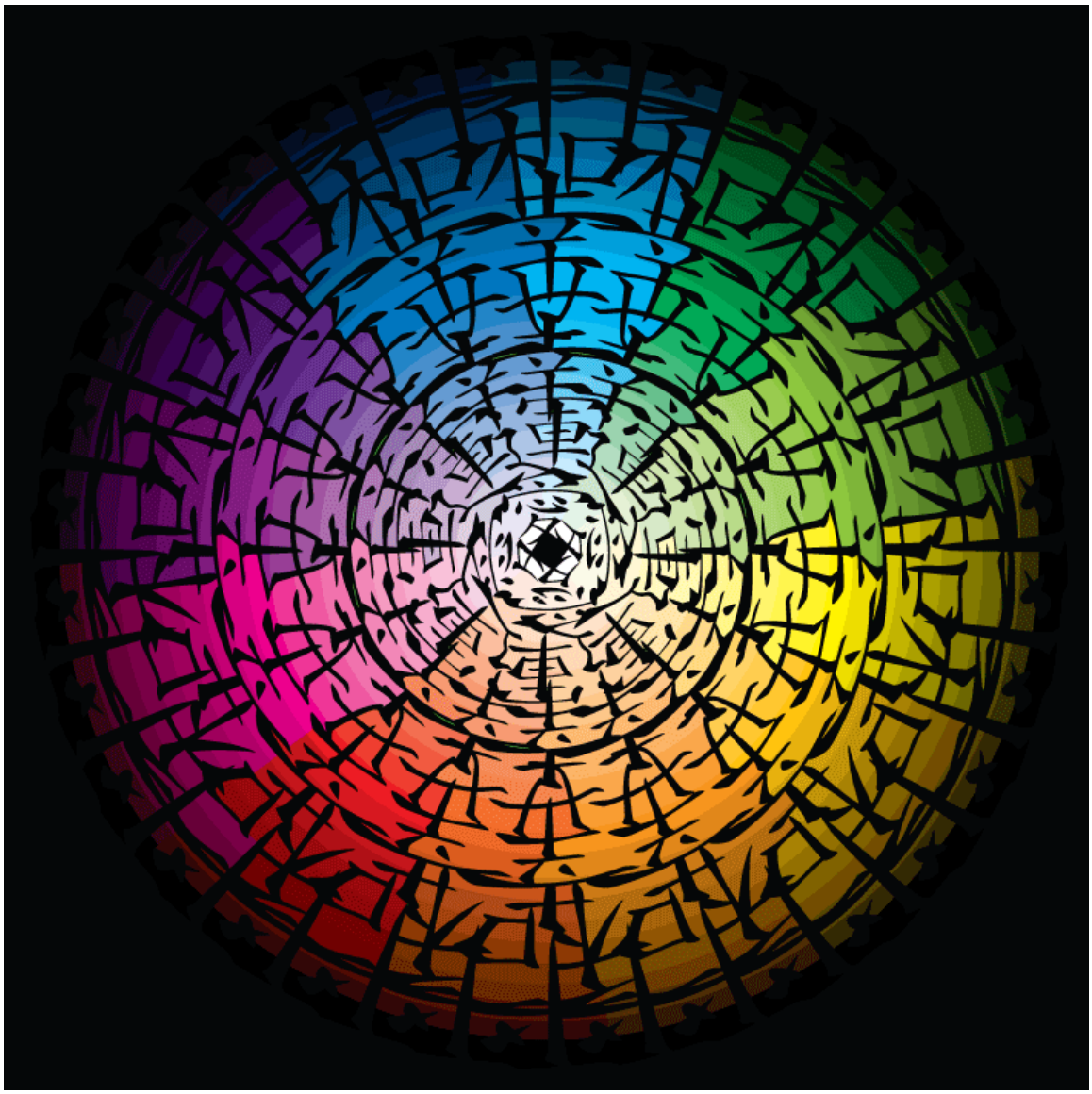


Elaine West, Color Final

This next group of examples is all digitally created.



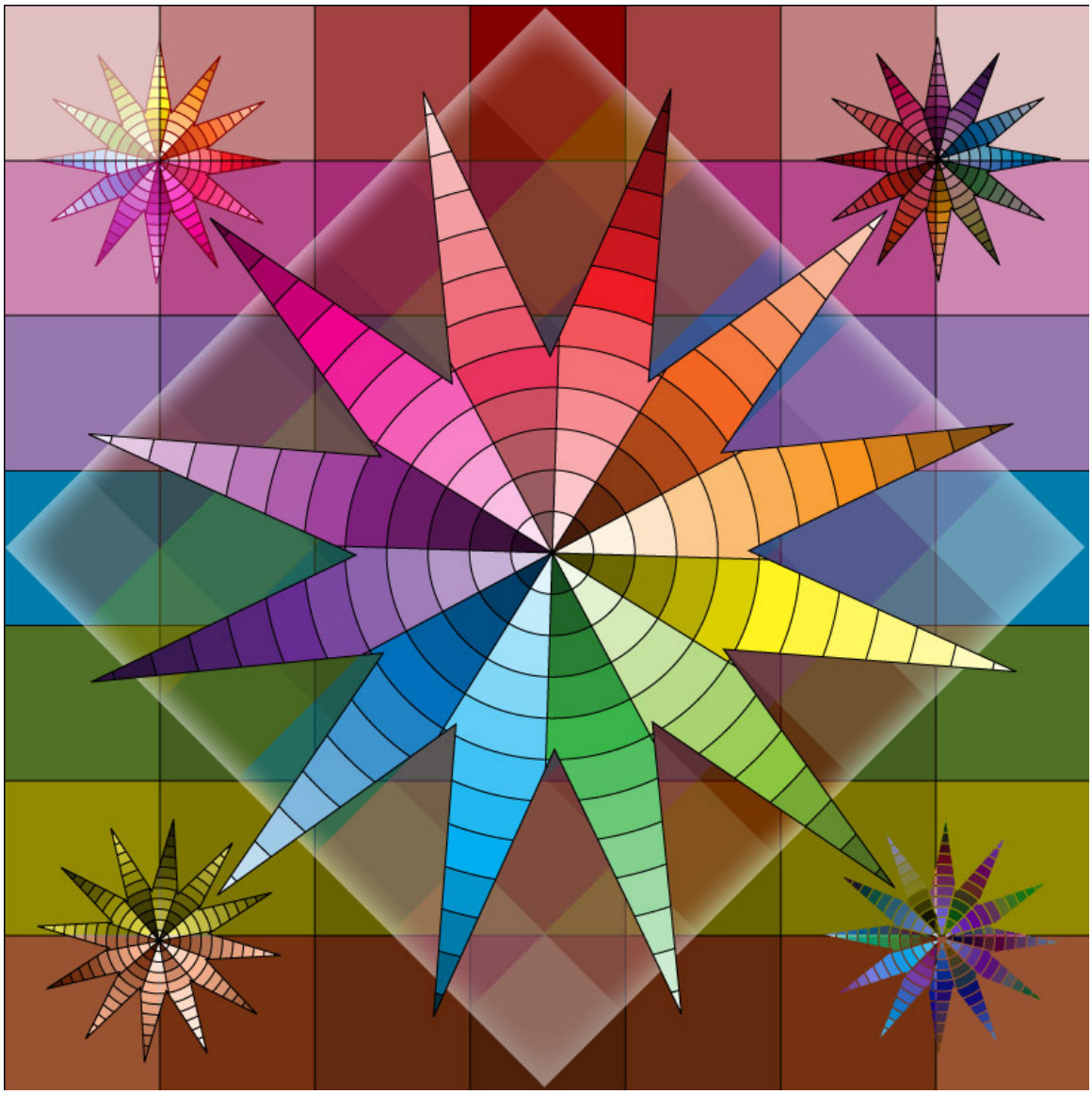
M. Humfeld



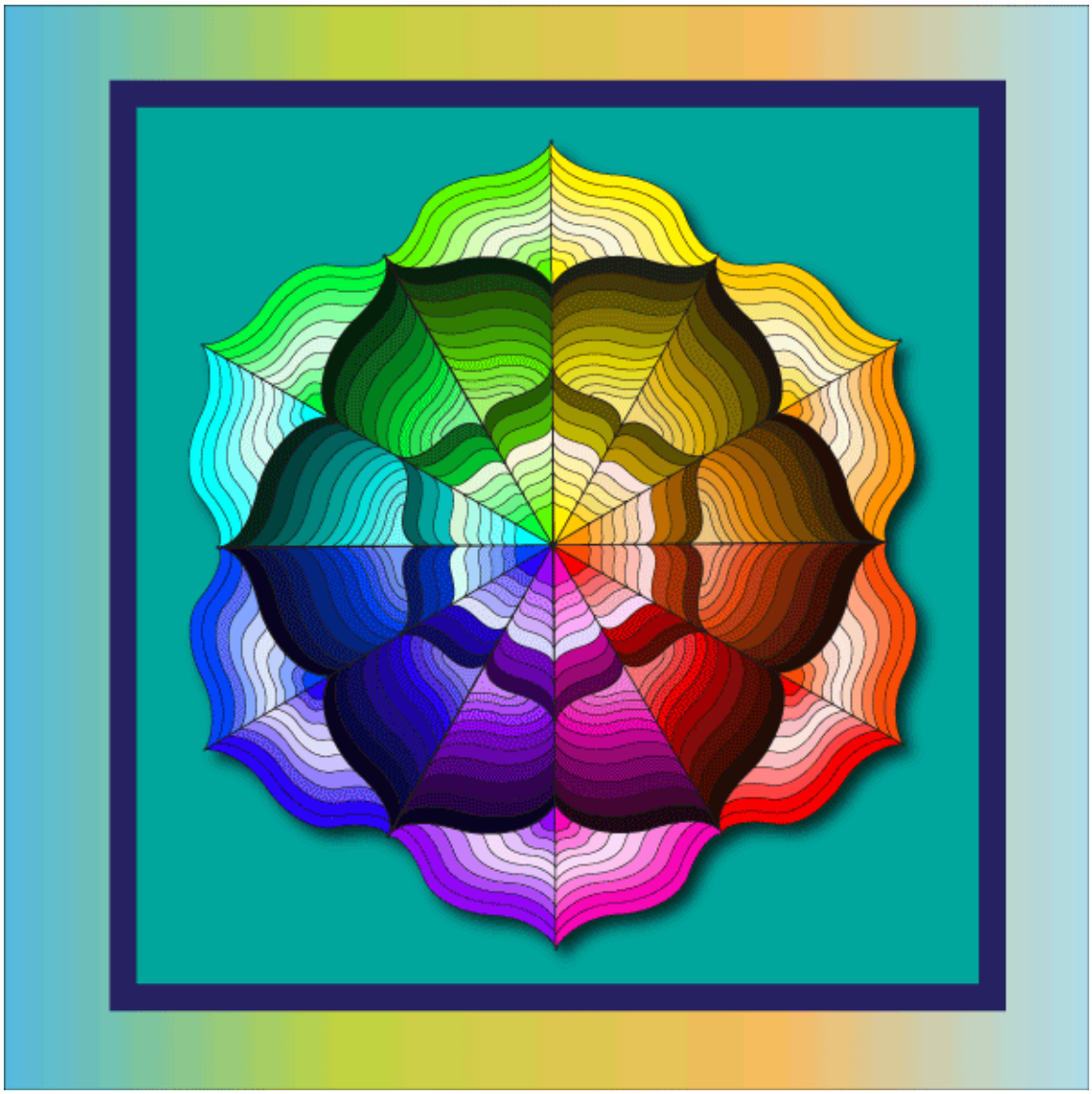
C. Meighan

This design is a spectacular example of using a character as the structural division of the circle, and filling the sections of each 1/12 of the radial design with shades at the exterior edge, progressing to tints in the center. This created a great deal of luminosity, as if we are looking at the top of a Japanese lantern.

M. McCormick



Scott Taggert



Lorna Miller

Lori Yung