Painting with Color Scales

I came to painting rather late in life; indeed I had been a serious, practicing musician for over 40 years when I first even attempted to draw with a pencil. So when I finally took up painting, I was very eager to bring as much as possible of my knowledge and experience as a musical artist over to my practice as a visual artist. At the time, I had just seen an exhibition of Synchromist paintings by Stanton Macdonald-Wright, and I felt that his use of "color scales" was a perfect way to tap that reservoir of ability. So, at least in some of my work, I have adopted the color-scale approach to painting. In this article, I will give a very brief sketch of the history and basic elements of Synchromism, followed by a more in-depth description of one of those elements: **color scales**. Then I will explain how I have extended those principles to create a **Neosynchromist** style.

Synchromism

Synchromism was an art movement based on the concept of painting "with color". The movement had only two members, Americans Stanton Macdonald-Wright (1890-1973) and Morgan Russell (1886-1953). Their first showing of Synchromist paintings was in Munich in 1913. Russell abandoned Synchromism in 1916; Wright, however, painted many of his most compelling canvases in the late teens and 20s, holding to the Synchromist principles into the early 1930s. He remained a color-painter throughout his life and returned to use of color-scales (see below) in his later years.

The basic elements of Synchromism are:

1. **Use of color alone to define form and space**, based on the well-known psycho-visual phenomenon that warm colors (red, orange, yellow) appear to advance and cool colors (green, blue, violet) to recede in the visual field.

2. Application of **"color-scales"**, directly related to musical scales, to create the color scheme, and thus, the emotional impact in a painting. More on color scales follows below.

3. Form based on the **"principal rhythm"**, also called the **"hollow and bump"**, consisting of 2 contraposed curves, expressed as ( ). This fundamental physical tension is reiterated over and over in synchromist work.

Color scales

First of all, what exactly is a **"color scale"**? Put most simply, a color scale is a set of some number of distinct colors. By "distinct" I mean different in hue, not merely in value; for example, a pink made by mixing red and white is not considered distinct from red, whereas orange is considered distinct from red. How many is "some number"? Well, with a few exceptions, in the world of music, scales generally consist of 5-7 notes chosen from the so-called **chromatic scale**, which encompasses all the notes (see below). So, could you just take any old 5-7 notes or colors at random and make a "scale"? Well, yes, you could. And you might get really interesting results. However, there is also a more systematic approach, primarily based on **musical major scales**, which makes color scales much more useful in my visual artistic process. That more systematic view is what I will present now.

Color scales were primarily the invention of Canadian Percyval Tudor-Hart (1873-1954), who taught both Wright and Russell in Paris. **Tudor-Hart related the color wheel directly to the musical chromatic scale.** The basic idea is as follows:

The "standard" paint color wheel consists of 12 colors: the 3 primaries, red, yellow, blue; the 3 secondaries, orange, green, violet; and, 6 tertiaries, made by mixing a primary and one of its adjacent secondaries, for example, red-orange (tertiary), a mixture of red (primary) and orange (secondary). There is some confusion about the names of the colors; for example, some authors name the primaries magenta, yellow, cyan. Likewise, the western musical chromatic scale has 12 notes: C, C#, D, D#, E, F, F#, G, G#, A, A#, B. We tend to call it the "western chromatic" scale, but in reality, the same basic 12-note gamut has arisen in virtually every musical culture throughout the world.

Why there should be a common 12-note scale, and why there is a common 12-color wheel, throughout the whole world, are fascinating questions in and of themselves, and should be considered in a separate article. Suffice it to say for now, that there really are basically 12 musical notes and 12 colors on the wheel. So let's see. Twelve colors and twelve notes. Coincidence…..? Hmmm.

So, how does one create a **"color scale"**? First, choose a predominant "key" color, for example, red. Then, map the colors of the wheel onto notes of the piano keyboard, starting with the key color at C. Thus, in our example,

Red	=	C
Red-orange	=	C#
Orange	=	D
Yellow-orange	=	D#
Yellow	=	E
Yellow-green	=	F
Green	=	F#
Blue-green	=	G
Blue	=	G#
Blue-violet	=	A
Violet	=	A#
Red-violet	=	B

What is the **musical major scale** and where did it come from? Many people know the major scale as **do**, **re**, **mi**, **fa**, **so**, **la, ti** and back to **do**. The major scale dates from the time of Pythagoras, the Greek mathematician. Its mathematical/physical basis, as illuminated by Pythagoras, is very fascinating but beyond our current scope. What gives the major scale its characteristic sound is its **interval structure**. The interval (difference in pitch) structure of any musical major scale (regardless of its key) is whole step, whole step, half step, whole step, whole step, whole step, half step, where a whole step means skipping over 1 note, like from C to D, skipping C#, and a half step is going from one note to the next, like from C to C# or D# to E. For those less familiar with the piano keyboard, the notes that do not have the “#” or "sharp" sign after the letter are called the “natural” notes, or the “white keys”; those notes with the “#” sign are the “black keys” of the keyboard or “sharp” notes. The sharp notes can also be written with the flat (b) sign, *viz*. C#=Db; and, sometimes there is a good reason to use one or the other. To avoid confusion, I’ll only use the sharp sign (#). Note that there is only a half step jump from E to F, and from B to C; there is no sharp note between them. Thus the notes of the C major scale are C,D,E,F,G,A,B then back to C, in other words, the “white keys” starting on C.

Now having mapped the key color of red to the keyboard note of C, we can name the notes in the color-scale of **red major**: red, orange, yellow, yellow-green, blue-green, blue-violet and red-violet. These colors will now make up the color palette for a painting. The colors are almost always used pure, never mixed. The value of the color can be raised or lowered. The colors are deployed in separate, discrete, but possibly overlapping patches. According to Tudor-Hart, **"color melodies"** can be generated by spacing colors out, separated by neutral ground. Furthermore, **"color chords"** can be composed by the juxtaposition of particular colors from the

scale. For example, the root, or "tonic", chord in the musical key of C major is C-E-G, the C major triad. (The word **triad** is used here in the musical rather than the color-harmony sense.) In the example of the color key of red major, the root chord would be red, yellow, blue-green. This color triad, juxtaposing these colors, can then be used to emphasize the emotional, psychological content of an important area of the painting, for example, the face of a figure.

Other chord triads besides the root chord can also be generated. To form a triad, you take any note from the scale, skip over a note, take the next note, skip a note, then take the next note. For example, you start with G, skip A, take B, skip C, and take D, resulting in the triad G-B-D. Generating chords in this manner is called **harmonizing the major scale**.

Any color can be chosen as the dominant key color, so how do you choose? Stanton Macdonald-Wright believed that each color key was imbued with its own emotional and psychological qualities and impact. He lays these out in his book, A Treatise on Color. He actually builds these meanings up from one simple axiom: Yellow = Light, Red = Strong, Blue = Shadow. Proceeding from there, Orange = Red +Yellow, or Strong-Light, Violet = Red+Blue, or Strong-Shadow, Green = Yellow+Blue, or Neutrality (Light+Shadow). He then associates these attributes of the colors themselves to psychological/emotional states of the mind, deeming some color keys suitable for some subjects and unsuitable for others. I personally find this last bit a little too subjective and restrictive.

One way I narrow the choice down is simply to decide whether my painting will be warm or cool. A southwest desert landscape at midday will probably make me think of a warm or hot color, like yellow-orange; if I were painting a human figure and wanted to convey a down or depressed feeling, I might choose (…wait for it…) blue.

Sometimes I already have a musical sound in mind, with its own scale, or more correctly, its own mode (see below). If I have a particular mode in mind and one or more colors that I want to include, then the mental exercise of finding a color-mode satisfying all the requirements can be quite challenging. For example, say I want a major color scale with both red and red-violet in it. Well, there are only two choices: red major and blue-green major (you do the math).

Sometimes the answer to the question, “What key should I use?” is rather less analytic and more subjective. You choose the key that you like at that particular moment, for whatever particular reason you have. Sure, I let my brain do a little

work on the problem, because that's fun and can be helpful, but sometimes, in the end, it's my heart, or my gut, that decides, or some other internal "craving" for one color or another.

How do you actually use a color-scale in a painting? Here is an easy example. Without thinking about it too much, I choose a color. Say, blue-green. This is my root color. Now I write down the colors of the blue-green major scale using the formula above: blue-green, blue-violet, red-violet, red, orange, yellow, green. Then I create a 4-color chord, á la the description of triads above, except extended by one note. The resulting chord is blue-green, red-violet, orange, green. Borrowing from music nomenclature, I name this chord **Blue-green Major7**. Now I can create an abstract painting depicting this color-chord. I take each color of chord in turn and apply it to the canvas, a splash of thin wash here, a bold slash there, generally letting the each color dry before applying the next color. I try to emphasize the root color, blue-green in this case, perhaps by using large blotches of saturated color. At the same time, I try to balance all the colors, just as I would try to balance the notes of a guitar chord, so each is distinct, but not overpowering. Sometimes it takes a few rounds of applying the colors, but the result can be a very cool-looking, simple idea.

A slightly more elaborate example is using a color-scale for a figure painting or still life. For a nude figure, I would use the different chords from the scale harmonization for different elements of the figure. I might use the 3- or 4-note chord based on the root note of the scale for the face, the chord built from the 2^{th} note of my scale for an arm, and the chord built on the 5^{th} note for a leg. So using the scale of blue-green major as the example, the face would be blue-green, red-violet, orange, green. The arm would be blue-violet, red, yellow, blue-green. The leg would be orange, green, blue-violet, red. The bump and hollow riff is extremely useful in drawing nude figures or animals, so I always look for these shapes in my models and feature them in the painting, like in the upper arm or knee. Applying the first element of Synchromism, I would try to depict advancing planes in warm colors and receding planes in cool colors. So if the face is looking out at the observer, I might use orange for the nose, because it sticks out, red-violet under the eyes and blue-green for the sides of the cheeks.

So why use color scales in the first place? Unless one is interested in music as well as painting, there may be no good reason. For me, it gives a way to use my knowledge of musical scales as an analog to understanding color. By mapping my knowledge of music notes onto the color wheel, I have a better handle on the relationships between colors, how to flow smoothly from one set of colors to

another in a painting. I use my musical sense to tell me when I should abandon my scale and "go outside", when and how to create tension/release. Also, by limiting myself to the colors of my chosen scale, I free myself to be expressive in other ways. Most importantly, I can use my ability to generate musical ideas to suggest corresponding color ideas to try.

It is important to point out that the use of color scales is just a tool. I spend a lot of time thinking about music scales, but when I am actually playing music, I am not thinking about the key and scale I am in; I'm just playing, but my knowledge and experience of scales influences how I play. In the same way, when I am painting, I am not thinking about my color scale, I just have those colors on my palette and no others (except white). I am therefore freer to explore other variables.

Is there really any connection at all between the 12 colors of the wheel and the 12 musical notes, or indeed between musical and visual arts whatsoever? It's debatable. There are lots of differences in the way we perceive and understand pitch and color, and in the way they affect our emotions. In my heart, I feel such a connection exists, and that color scales are a great way for me to start exploring it.

Neosynchromism

As I said above, I have found some of the original Synchromist's ideas restrictive. This is partly because I think they demonstrated rather a limited grasp of music theory, which is largely the study of scales, and partly because of the times. Wright's personal tastes in music appear to have been somewhat conservative, even by early 20th century standards . In A Treatise on Color, he calls more discordant intervals such as the flat-5th, or tritone, "noise instead of sound…ceas[ing] to have any harmonic significance". If someone were to sing out of tune, it would be "ludicrous, and certainly valueless as harmony". Nowadays, the flat-5 interval is considered the grit that gives jazz/blues/rock-n-roll harmony its edge and interest, essential to its character. Today, people sing out of tune all the time, and it's called "style". Wright characterizes the musical key of A-flat as "too sentimental", but most modern musicians do not recognize this kind of attribution to the different keys.

The early Synchromists mostly stuck with the major musical scale. But there are many other scales besides the major scale, viz. melodic minor, with totally different interval structures. And even within the context of a given scale, there is the concept of **mode**. "Mode" basically means: out of the 5-7 available notes in the scale, which one is the starting note or main tonality. For example, consider the C

Major scale described above. The notes are C-D-E-F-G-A-B-C. We visualized this above as the white keys of a piano keyboard. If we start at the bottom C and play the notes in ascending order we hear the C Major scale. But what happens if we play these same white keys, but start at D instead of C. The answer is that you get a completely different, but somehow related, sound; it has a completely different, but somehow related, vibe or feeling. If you try this starting on E, you again get a completely different, yet somehow related, result. And so on. These are the different **modes** of the C Major scale.

To me, this means that you can use the exact same seven colors from a color scale, and by somehow "starting with" or featuring, or otherwise emphasizing, the different notes/colors of the scale, you can create completely different vibes with the same colors, just by which color you make the root. The original Synchromists did not appear to consider this at all. And that's just with the Major scale; there are lots of other scales out there, each with a full array of Modes. Also, there are other ways to generate harmony, over and above the triadic method described above.

Neosynchromism is my attempt to update the original principles of Synchromism to reflect the new, more wide-open, approach to the elements of music that abound today. This means new scales, new advanced, extended harmonies and new rhythms. That should give me plenty to do for the next 50 or so years.

Conclusion

The use of color scales has been a very gratifying and rewarding experiment; it has allowed me an easier understanding of the color wheel and also has helped me create some pretty cool paintings. This has led me to find more connections between musical and visual arts and to deepen my understanding of that connection. For example, how can I let my natural, well-developed sense of musical rhythm express itself visually? What are the similarities and differences in the way our senses perceive pitch/sound and color/sight? I will explore some of these connections in future articles.

Bibliography

South, Will, *Color, Myth, and Music: Stanton Macdonald-Wright and Synchromism*, 2001.

Wright, Stanton Macdonald, *A Treatise On Color*, 1924.