GREEN WITH ENVY

Second Kit Kat Club Essay, 20 March 2018

Thanks to Sid for his introduction ……

I began contemplating the construction of this essay some time ago. At least I began thinking and worrying about this essay some time ago – actually shortly after my first essay! What was I going to talk about?

Just think about the erudition and entertainment that our members have provided for us in the past more recent essays. Sid Druen finished our 2016-2017 season with "Peas & Queues," reminding us of the importance of appropriate social behavior. Since then we been taken outdoors by Mike Abrams and Mark Real, and into Shakespeare's bedroom by Jim Carpenter. Bob Wandel challenged us to look at the architectural world with a different perspective and, just last month, Roger Sugarman took us "Back to the Future," looking at philanthropy from good to questionable, from "light" – that is made up of all the colors, to "dark," which may be considered to have none.

WOW! I had been entertained, educated and was now envious – literally GREEN WITH ENVY! Could I measure up to these standards?

And then I asked myself the pivotal question. Why is envy green? And so began my wanderings through the literature of writing with expressions using color, and then trying to understand how these idioms developed. How well do we understand what color is? Does everyone see color and, if not, would this affect their appreciation of verbal expressions that use color? And when we speak of color, are we referring to the color of real objects or the representation of color in paintings? And has the development of paints and dyed goods affected our idioms using color? And finally, who is "we?" Do gender, nationality, religion, or education affect our use of color expressions?

In 1666, Isaac Newton continued a known demonstration by allowing sunlight to pass through a prism and break into colors. What he did next, however, revolutionized our concept of colors, for he then used a second prism to "bend" the colored lights – red the least and violet the most—and turn them back into white light. Newton took 38 years to explain and publish this work. He also

increased the number of colors that were named in the rainbow, adding orange and indigo, giving us seven and the common acronym ROYGBIV. It is hypothesized that he chose the number seven because he was not only a Christian but an alchemist. Seven was a recognized number in cosmology – we have seven days of the week, the musical scale has seven notes and there were seven planets – at least until Newton's telescope later allowed the discovery of Pluto and Uranus.

So, what is color? Simply, color is our brain's recognition of that part of the spectrum of wave lengths that stimulates the cones in our retina. The end result of this process is the Spectrum of the Rainbow. I decided to explore this essay along two interwoven pathways. The first was to look at each color and the expressions that use this color in language. The second pathway investigates the history of color in painting and dyeing of fabrics. I will warn you now that these questions will not necessarily be answered in black and white. What follows will be the light-hearted ramblings of a would-be watercolorist who hopes to both keep you awake and entertained, often a difficult task after Mr. Katt's sumptuous meal.

ROYGBIV gives us a convenient direction here, so let us start with the color RED, a symbol of life, health, vigor, war, courage, anger, love and religious fervor – the common thread being that all require passion and the "life force" which drives passion is blood. Bleeding to death or the willingness to do so also symbolizes death, and this ambiguity in the use of color will be seen throughout this talk. In the Catholic Church, only Cardinals were of sufficient stature to wear scarlet red. Mary Queen of Scot was executed in a red and black dress – red for courage and black for death. Luckily, we have enjoyed the red-carpet treatment provided this evening by the Columbus Club, giving us an opportunity to paint the town red. Had the Club failed, I would have been seeing red while Christopher Katt might have become red in the face with embarrassment.

Creating a red dye was a significant problem for centuries. For years an Indo-European bug, the kermes insect, was the basis for red dye. The word crimson comes from the Sanskrit *krim-da* – which was laborious to produce – but it was fugitive – the color did not last when exposed to time and light. The word, however, gave us "scarlet woman," meaning a woman "of the cloth," which

interestingly has been variously interpreted as either a prostitute or a person of a religious order, a debate I will not entertain.

During the exploration of the Americas, a better source of red for dyeing cloth was found in Cochineal bugs. These feed and grow on prickly pear cacti, and had to be hand-picked but the pigment from these bugs was superior in color-fastness to that dye made from the Eurasian kermes insects. Pigments and dyes are different. Pigments give color but soaking cloth with a pigment does not usually result in a permanent color change in the cloth. To turn a pigment into a dye that will permanently color a fabric requires a mordant, usually an inorganic oxide. The mordant used with cochineal bugs was alum, also a very rare and valuable commodity in the Middle Ages. In Shakespeare's "Twelfth Night," written shortly after cochineal red dye arrived in London, Countess Olivia describes rouge on her cheeks as being "in grain," coming from the Spanish word *grana,* meaning little bugs. The term "in grain" was used to mean cutting-edge fashion and not to describe a specific color.

A third method of dyeing a red color was the use of Bastard Saffron, also called safflower. When this plant was subjected to an acid wash the resultant color was pinkish-red. Legal documents in England were tied together with tape dyed with this orange-reddish hue, and so we have the expression "red tape" for any bureaucratic knot. And so a theme is seen here which will be present throughout the world of color. Rarity, difficulty in production and lack of availability will increase the value, and hence the importance of a given color used in painting and the dye industry throughout time.

The color ORANGE is typically a warning color. It is not as strongly a symbolic color such as the primary colors of red, yellow and blue. I struggled, unsuccessfully, to find an orange idiom in English.

Orange and red are very closely aligned in the world of paint and dye manufacturing. The two most famous old uses of orange color are in the violins of Cremona and Turkish carpets.

Cremona, Italy, is the place we associate with special violins that are a specific hue of orange. In 1499, Giovanni Leonardo da Martinengo, a Jewish lute-maker, taught his art to the Amati brothers, and one of their grandsons taught

Stradivari and Guarneri how to make this famous, rare and valuable varnish– but no one knows how to reproduce this – the extreme example of rarity.

The orange-red dye found in Turkish carpets come from the Madder plant, *Rubia* tinctoria. The plant has been very valuable for decades and has never really been replaced by a synthetic dye – because synthetic dyes contain one color while the orange of "Rose Madder Genuine" includes some combination of blue and yellow, which makes an interesting orange.

Orange as a warning color seems to have been codified by Pope Innocent III in the Fourth Lateran Council, 1215, when the Jews were made to wear "yellow" badges, which are thought to have been more orange than yellow. Spain and later Italy adopted the use of patches or hats of this color for the same purpose.

Why is orange a warning color? Visually, black & white together are considered the most visually attractive to your eye. The next most visually "attracting" composition is the apposition of complementary colors – a primary next to a secondary color on the color wheel -- so orange against a blue sky, or orange-red against green vegetation conforms to this rule. Just think of warning road signs or hunter's garb.

An interesting note about color-words which are not representative of color in Western Art. Mughal artists from Persia and India extensively used a reddish-orange color – called *minium* -- which they made by heating white lead. Their paintings became to be known as miniatures – which we think of as small – but it was for their color, not their size.

YELLOW as a color is very ambiguous. It can be the color of life – corn, gold, angelic halos, the color of evil -- bile and the sulfurous yellow of the Devil, or a warning color– especially mixed with black as in bees and snakes. Great power can be suggested by yellow, such as in the sunshine-yellow robes worn by Chinese emperors. But decline is also associated with yellow, such as in your complexion with illness or the change of the color of leaves in Fall to yellow before they themselves fall.

One must not be afraid to raise the yellow flag warning of a contagion on a ship or you might be accused of being a yellow-bellied coward, even though the yellow streak running down your back might not actually be seen. In contrast,

Chaucer wrote of a knight whose "heer, his berd was lyk saffroun" and apparently meant to indicate the luxurious nature of the color yellow.

Yellow has always been a difficult color to manufacture, both as a paint and as a dye. As noted before, difficulty is associated with expense, hence often the use in any given society only for important items. Indian yogi traditional clothing was white for the uninitiated, yellow representing light for aspirants and orange for the teachers – orange surpassing yellow because you had to purify the yellow dye to make orange. Indian Yellow, traditionally made from the urine of cows fed with mango leaves, was both a bad diet for the cows and difficult to do.

In Egypt and China, yellow is the highest and noblest of colors, used for royal and religious purposes. The Chinese prized gold—the metal -- above yellow but could not use it for painting because other colors placed on top of it turned black. The closest they could come to gold itself was yellow paint. And the best yellow paints – such as Gamboge yellow and Saffron yellow – are difficult to manufacture. Gamboge yellow, also called ivy or rattan yellow, comes from trees in Cambodia -- the name "Gamboge" is a corruption of the country name. It takes years to collect the sap to make this color hence its expense. Saffron yellow from the *Crocus sativus* is famously difficult to prepare – the pistil is made up of 3 stigmas which have to be hand-picked at exactly the right time of day on a specific day and large amounts are required. Used now largely for its color and odor in cooking, it is still very expensive.

GREEN is typically representative of the environment, life, wisdom but also death.

The ancient Egyptians thought that their god Thoth led souls of the dead to "a green hill of everlasting life and eternal wisdom" --interestingly mixing both life and death with green.

Our esteemed Kit Kat president gave me the green light -- the go ahead -- to proceed with this topic, without asking for a greenback -- a bribe suggesting material success -- to hopefully lead our members to greener pastures, of entertainment if not enlightenment. And although not being a greenhorn -- a novice -- I still worried about going green around the gills -- pale or sickly -- while attempting to come up with an essay which would leave later essayists green with envy.

When we think of green being an important color in art and every-day use we often first think of Celadon green. The Chinese called this color *mise* which means mysterious color and in fact did not find the original celadon bowls or their definitive color until 1987. Much to everyone's surprise – and indicative of the problems of any research –the bowls were actually more a muddy brown-green rather than the classic color which we now think of as celadon. Celadon pottery comes from clay with just the right amount of iron -- just three percent – more and the pottery is black. Celadon pottery became more important than gold because gold is predictable and this glaze is not, hence representative of nature and hopefully, harmony. The novel *Astre'e,* written in 1607, is an example of combining our paths of exploration – word idioms and the history of their origin. The novel has a hero named Celadon who was always dressed in a pale green. The color became so popular that fashionable people were said to be dressed *a la celadon* regardless of color.

As a color, green represents nature -- grass, fields, and trees, hence life and fertility – but living things in nature die and we as human beings often turn a greenish pallor as we die. Green pigments, such as verdigris made from copper, often turned black with time. This foiled the Italian painters but the Flemish learned to varnish it to keep the color.

We should not leave our discussion of green without mentioning the danger in green paints. Scheele's green, a very popular bright green color used after 1777, contained arsenite. Historical research suggested that Napoleon died in 1821 of arsenic poisoning due to exposure to the green dye used in making the wallpaper which adorned his rooms on St. Helena, where he resided between 1815 and 1821. More recently, however, evidence has shown high levels of arsenic in Napoleon's hair samples throughout his life – the sources unknown.

BLUE, in mythology, was related to Zeus making it rain which suggested tears and therefore sadness. Water was always considered blue – sad -- rather than colorless but bodies of water are only blue when they reflect a blue sky. In contrast, a blue sky or calm blue water can suggest calm reflection leading to the truth rather than sadness. Loyalty is often represented as a true blue state.

Written blue-idioms abound in English. Although I am not a blue blood -- an aristocrat -- I have been rather careful about avoiding blue comedy about socially taboo subjects, hence not violating blue laws, those that concern morality issues. Nonetheless, as out of the blue or unexpected this may seem to you, I am not, in the least, feeling blue, although a blue-print of this talk might keep us organized.

The story, true or not, that almost everyone knows as an explanation of the expense of painting with Ultramarine Blue, comes from Michelangelo's painting "The Entombment." Begun in 1501, the space designated for the Virgin Mary was unfinished either because Michelangelo could not afford or could not find Ultramarine Blue paint before he moved to a different city. *Ultramarino* means "beyond the seas" in Italian and the paint is made by grinding the stone, lapis lazuli, the best of which comes from Afghanistan. In myth, lapis lazuli has probably been prized because the stone has flecks of gold in it which, with the blue background, suggest the stars in heaven. The gold is, of course, fool's gold or pyrite. Without time to age, this paint is quite gaudy but we are used to seeing a more subtle color in the aged paintings of the 1500's.

Cultural representations are not consistent. While Roman Catholics use blue to signify the Virgin Mary, the Russians use red and the Byzantine artists of the 7th Century used purple, the color of mystery. Virtually all cultures, however, have used white, representing purity and innocence, in her depiction. Pope Pius V, in the 16th century, standardized liturgical colors for robes, but blue was never used since it was kept exclusively for the Virgin Mary.

Cobalt blue is made from rocks mined from the earth's crust which contain this magnetic metal in a combined form with other elements. These rocks typically contain arsenic, and the mining-smelting process causes great damage to the lungs and skin of the miners, so the Germans called it *kobald* which is the name of a vicious sprite in lore, not a word for a color.

INDIGO, as beautiful as the color is, does not seem to be used in color idioms. In fact, the only one that I could find was the use of "Mood Indigo" in the Cole Porter song, and the reference certainly seems to that of a dark and mysterious mood. My guess is that it is because it fits, in our normal color scheme, somewhere between a very dark blue and a very dark violet or purple –

hence it does not have its own identity in language. Or if it does, it is quite rare. The word "indigo" does not refer to a color but comes from a Greek term meaning "from India" where the source plant is *nila,* that means dark blue in India.

Nila was extremely expensive to import so dye makers in Europe used a plant called *woad* to make this color. Woad, as a plant, travels easily in the wind, lands and grows to take over, hence the origin of our word, weed. It is, in fact, illegal to have or grow this plant in the United States. To "fix" this color the dye has to be reduced, which was done in vats of stale urine in 18th century England. People were paid a penny for the urine collected in public pots, hence the expression "to spend a penny" in England, meaning to urinate.

I have already noted that Sir Isaac Newton added indigo as a "new" color in the rainbow along with orange. Other cultures, such as China, define six colors in the rainbow – yellow, white, red, green, blue and purple – but not indigo. If one accepts that white is not a color, having five colors fits with the Chinese cosmological importance of the number five – five basic elements (wood, fire, earth, metal, water), tastes (salty, spicy, sour, sweet and bitter) and musical notes --the earliest flutes had five full tones in the scale, not the current Western diatonic scale of five whole and two half notes.

VIOLET or PURPLE -- the end of our ROYGBIV acronym -- almost always denotes spirituality, holiness, and royalty.

Western religions – Jewish, Catholic and Protestant – have typically used purple in their ceremonies. The Jewish temple, which is said to have displayed the Ark of the Covenant, had ten curtains surrounding it in the colors blue, purple and scarlet. In the 16th Century, Pope Pius V, declared purple the appropriate color for liturgical robes denoting penitence. And in 1660 in Great Britain, the king wore purple as a mourning color upon the death of his brother, a victim of smallpox.

Difficulty in production made this, as all colors at some point in time, scarce and hence valuable. The earliest known violet/purple dyes came from the Arabian Peninsula, made by the Phoenicians in 3000BC. In fact, the name Phoenician comes from the Greek word *phoinis* which means purple. The Persians in the 6th Century BC did not believe how the dye was made and so distrusted what they

were told. They considered the color mysterious, but also precious. For the Romans, the color was ambiguous – the color of Jupiter, therefore the power of royalty and priests, but also the color of Bacchus –suggesting unbridled revelry. Remember, that after Julius Caesar defeated Cleopatra in 49 BC, he had her palace decorated in porphyry stone, her barge sails dyed in Tyrian purple, and his toga, upon return to Rome, dyed the color purple which only he could wear.

Classically made from the shellfish, *Murex brandaris* and*Murex trunculus*, the dye was popularized by the Romans in the town of Tyre on the Mediterranean near present-day Beirut, and known as Tyrian purple. With the development of the New World, European dyers turned to Mexico and Central America, where the shellfish used – *caracola,* a type of conch – became the primary source of this process.

Purple and violet are used less commonly than some colors in color-idioms, although one could consider this essay purple prose, elaborately written. We do award a Purple Heart for battle wounds, and still talk of being born to the purple for those born into a noble or royal family.

Although I have emphasized the classic rainbow colors of ROYGBIV, there are other color idioms that use colors not classically on an artist's ROYGBIV palate, but are certainly known to Westerners: white, black, gray, silver, and gold.

We have already seen that the color white has been used over the centuries to denote innocence or purity. On the other hand, whiteness is frequently used to suggest the lack of blood where it might be useful, as in your blood vessels. During a recent vacation, a white-knuckle ride -- scary and nerve-racking -- that we had in Sicily, found Sid as white as a ghost -- scared and surprised – and ready to wave the white flag of surrender. Many white idioms are derogatory or border-line, such as lily white -- overly Christian or goodly -- white trash, or whiter than white --uncompromisingly British.

BLACK idioms as historically used are virtually all derogatory and need no explanation in common usage: black comedy, to blackball, to blackmail or to have a black day. Black Friday, also known as Good Friday, is traditionally sorrowful in religion although, on the contrary, the day after Thanksgiving is now designated as Black Friday, an acceptable term for hopeful profitability. And we must not

allow our foray into color idioms to insist that everything is either black or white – oversimplified.

If you mix black and white you get GRAY – which is an ambiguous situation. A gray mood suggests unhappiness but not tragedy, while a gray area has one caught between two opposite or differing views.

Well, I have intentionally not used a SILVER screen – the cinema –to amplify my talk, because I wanted to offer you something on a silver platter – whole-heartedly –a GOLDEN opportunity - one which might not be repeated – to think about color using words without using visual images.

Along with idioms of color we also have COLORLESS idioms. We try to lend credence or entertainment to a story by giving it color, although under many situations we must be careful about telling an off color or immoral tidbit of information lest we make our listener feel a bit off color – uneasy or ill. We typically ask that someone show their true colors – display their true character – even asking to see the color of their money to prove their worth. You see, we can find the lack of color helpful, both visually and verbally.

Having looked at many basic idioms and lots of facts about the history of color in painting and dyeing, let us turn to the question of how universal the use of various color-idioms is or is not.

The first generality that I found in my wanderings is that the rules of color coding -- allowing colors to only be used for specific groups or individuals -- have changed over the centuries. Today, color coding only strongly exists for armies and schools. Another example, of course is the regimental ties which we proudly wear as members of this Kit Kat club.

A color-idiom starts with the name of the color. So, how do we learn to name colors and how many names are there? The debate has been between a Universalist system in which we learn and remember colors based upon our visual system itself, versus a Relativist system in which color perception is based on culture and language.

Most current data suggests that our use of colors is based upon culture. Cultural vocabularies vary greatly. We all have heard about the Inuit having many

words for snow in all of its stages, but we should also note that the Hawaiians have 65 words for describing fishing nets, 108 for sweet potato and 47 for bananas. Our understanding of this is that those things which are important to a culture demand more words to describe the nuances of that item.

Cultures vary with respect to the specificity of words that describe a color. Twenty-one languages have distinct words only for red, black and white. To a Westerner the word red brings to mind one and only one specific color on the color wheel, but this is not true in many other cultures. Although I could not begin to research color idioms in other languages, one might guess that verbal color idioms are affected in their writings. English and many major languages identify eleven basic colors: black, white, gray, red, green, blue, yellow, pink, orange, purple and brown –but also eleven other half-colors, such as blue-green. At the other extreme of the linguistic spectrum, the Himba tribe of Namibia uses fewer words and lumps colors together. For example, *serandu* includes red, orange and pink, while *zoozu* includes all dark colors such as dark blue, dark green, dark purple, dark red and black.

One cannot discuss English as a written and spoken language in this setting without paying homage to someone who comes up in many a Kit Kat talk. This is, of course, William Shakespeare. In Old English the references to color were limited to red, blue, green, black and white. These colors were used because they were successful in conveying an effect to the theatre-goer who was in all likelihood viewing a play on a rather bare stage in daylight. Prior to Shakespeare the color green was usually associated with illness, which we still do today. But in "Othello," Iago notes: "O beware, my lord, of jealousy. It is the <u>green-eyed monster</u>, which doth mock the meat it feeds on." And to us today, jealousy is still green. And today we still use <u>pure as the driven snow</u> – which is white -- to suggest innocence and purity, after hearing Hamlet's advice saying "Be thou chaste as ice, as pure as snow, thou shalt not escape calumny. Get thee to a nunnery, go."

Even the rainbow is viewed differently in other cultures. I have talked about Isaac Newton and how he described the currently accepted Western picture of ROYGBIV. The Bassa people of Liberia, however, describe only two colors in their

rainbow: *ziza, which includes red, orange, and yellow, and hui, which embraces green, blue, and purple.* The Shona of Zimbabwe see four colors in the rainbow, and the Chinese five Western colors plus white.

And so if cultures vary in how they name colors, does this affect how the colors are used for different emotions and hence in color-idioms? The answer is yes. All nations associate black and red with anger, black with fear and red with jealousy. Many countries also associate other colors, along with those listed, with these same emotions. In Poland, for example, purple is used to denote anger, jealousy, and envy. For Germans the color yellow can be used for envy and jealousy. But certain colors are used uniquely for individual countries. Only Poland uses purple for anger and only in the United States are red or green used for envy. And so when I say that I am green with envy, you know that I am from the United States of America.

I do want to throw you a couple of curve balls, and suggest that what you are thinking and visualizing, secure in your experience with color idioms, may very well not be what much of the rest of the world is "seeing." Gender, culture and physiology affect what we "see" and hence, probably, our use of color-idioms.

Studies in gender difference show that regardless of age or level of education, women use many more words to describe color. I have found no specific explanation for this but, putting all of my reading together, I would conclude that the difference is that color descriptions are simply more important to women.

And what about the literature of color-blind writers? What about this Kit Kat Club? Red-green color-blindness occurs in about 8% of Caucasian men, 5% of Asian men and 4% of Black men. In its extreme, there is a rare condition of achromatopsia – total color-blindness –found in islands of the South Pacific and described by the neurologist and popular author, Oliver Sacks, in "The Island of the Colorblind." Are those of us affected by color-blindness less likely to use color-idioms in our speech and writing just because these linguistic terms do not have the same impact on us personally? Quite simply, I have no idea. And if total color-blindness is one end of the human spectrum, might the other end be the world of synesthetics? Synesthesia refers to the condition in which the stimulation of one sense evokes a sensation in another. For example, certain synesthetics will

automatically associate a specific color with a specific number or might associate a location in three-dimensional space relative to their body with a specific color. All of us, however, seem to have some degree of emotional-verbal-color synesthesia, as we have discussed before. I have noted that I felt green with envy, but these color-emotion connections are culturally related and not really examples of true physiological synesthesia.

As we grow up we learn to name the colors of objects. But how important is it to identify and remember the color of an object? Must bananas be yellow? Do we unlearn colors as our brain function diminishes? There is an interesting study of Alzheimer patients who were tasked to remember objects with different elements – such as yellow or purple bananas. The patients were found to focus on shape and not color; they disregarded the color even if it could have been helpful for remembering what they had seen. So color is not always as important as we might think. But I, for one, am happy to have been able to share with you my exploration into the world of color and color-idioms.

Thank you for your attention.

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