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Synesthesia: A Potter's Experience and Research

by Lisa Orr

All my life I have had a passionate response to, and interest in, color. As a child I loved producing highly colorful craft projects. However, in art school in the early '80s, bright color was viewed with suspicion because it was considered a component of beauty, and beauty alone did not have enough substance to add up to a work of art. In ceramics, the

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BELOW: Compote, Oaxacan dripware.
OPPOSITE: Bowl, earthenware.

difficulty of achieving color reinforced what seemed to be a taboo against it. Our one blue glaze was nicknamed Cash-flow Blue, its appeal equated with selling out. I felt a bit at odds with myself for appreciating and valuing artworks from acclaimed colorists such as Turner, Matisse, Vermeer, Kandinsky, O'Keefe, Hockney, and Hundertwasser, while dutifully applying tasteful stoneware glazes to my pots.

Upon embarking on my career in ceramics, I frequently researched historical pottery in my spare time and discovered Tang dynasty *sancai* wares and other similar earthenware items from all over. I was profoundly attracted to the brightly colored, runny glazes highlighting forms with low-relief decoration, but I had no idea how to learn this new language for myself. After being in the pottery business for about six years, I returned to school to study with Betty Woodman, who used dazzling low-fire glazes over textural surfaces. As her student, I absorbed both the technical

basis and the freedom to experiment with colorful surfaces in ceramics.

Years later, I discovered that I am a member of a somewhat rarified group of people called synesthetes. Synesthesia is derived from the Greek *syn*, meaning together, and *aesthesis*, meaning perception.¹ A person with this condition, which is hereditary, is hard-wired to experience two senses at the same time. I have the most common form of it, in which numbers, and sometimes letters, are experienced in particular colors; for example, 0, 1, 8 are black, 3 is yellow, 2 and 4 are different shades of blue, 5 is red, etc. My mother has different color (and sometimes texture) associations with numbers. The colors of the numbers and letters are not ones I particularly like, but they have stayed constant since childhood. And I have found that I tend to notice and take much more interest in color than those around me. This prompted me to research the purpose of color in vision.

Color vision conferred a survival advantage by helping primates to distinguish, as Mollon says, "the cherries among the leaves." Early primates could see some color, but only at the lower end of the rainbow – violet through yellow-green – what is called the ancient dichromate color spectrum.² In this range our tree-dwelling, nocturnal ancestors had reasonable depth perception for their immediate surroundings, useful for climbing and hunting insects, but things at a distance were sometimes indistinguishable from each other. As primates evolved, the ability to perceive green through red – the trichromate spectrum – evolved in response to the need to see better during the day and to distinguish ripe yellow, orange, or red fruits.³

"The tree offers a color signal that is visible to the monkey against the masking foliage







of the forest, and in return the monkey either spits out the undamaged seed at a distance or defecates it together with fertilizer. In short, monkeys are to colored fruit what bees are to flowers. With only a little exaggeration, one could say that our trichromatic colour vision – if not the entire primate lineage – is a device invented by certain fruiting trees in order to propagate themselves.⁴

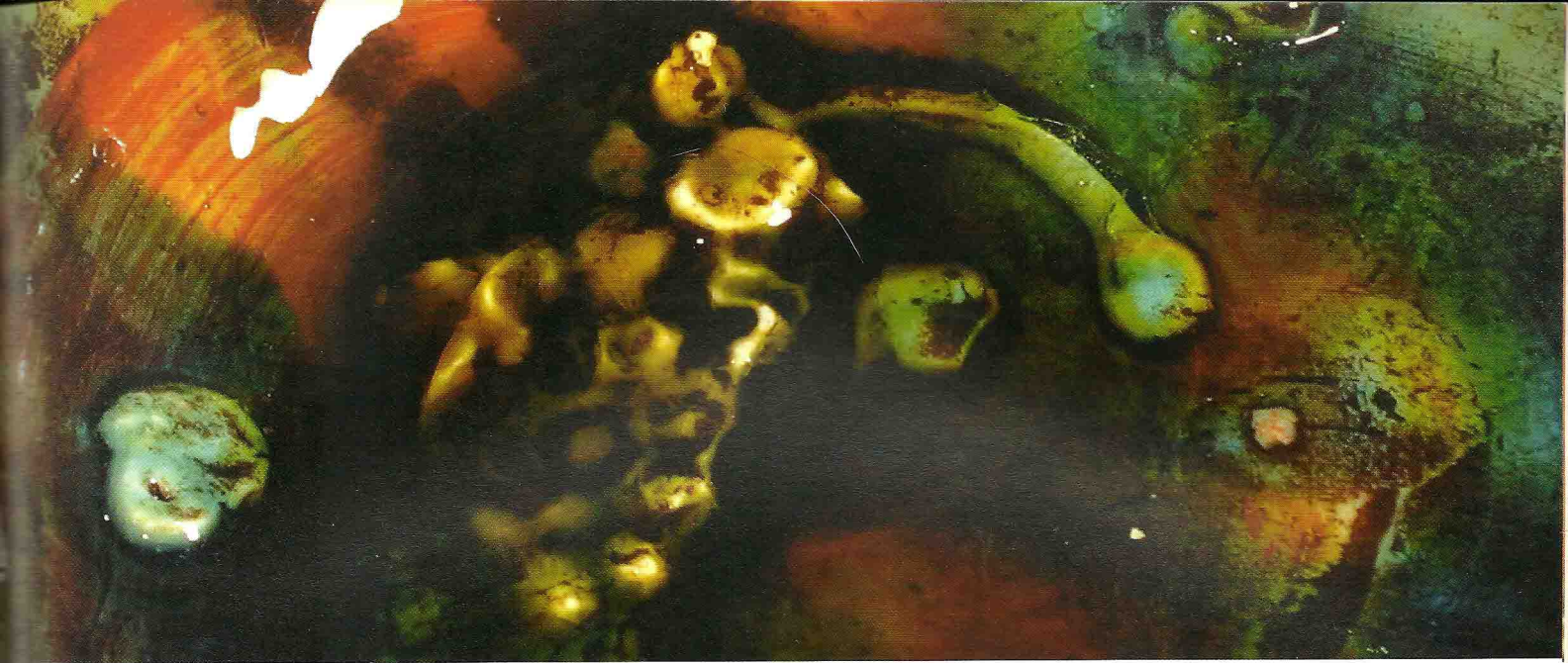
Color sends signals needed for survival. Humans, old world primates, diurnal birds, and surface fish have broad-spectrum color vision, which gives us a beautifully detailed signal regarding the makeup of the objects in our world.⁵ “Color makes objects pop out from their backgrounds, and gives us a sensation that corresponds to the stuff an object is made of, distinct from our perception of the shape of the stuff.”⁶ Color perception, then, is the basis for human perception of three-dimensional form and texture, and not just a beautiful enhancement to vision.

Color in art is full of power and significance. It is visual metaphor; it brings all sorts of signal meaning to a piece. Its magic is that many people have strong emotional reactions to it. Colors can conjure a vague recognition or memory of something similar: ripe fruits, turquoise sky, edible greenery, or other natural phenomena. There can also be psychological or cultural associations with certain colors; for example, in the United States, red,

green, and white make us think of Christmas, and “baby” pink or blue will indicate the gender of an infant. Additional references might have to do with political or historical content, religious or mythical connections, linguistic associations, or even color fads.

I consider my pieces replete with meaning drawn from nature. There are several flowers whose particular reddish orange-pink I am constantly trying to re-create in my glazed surfaces. The wildflower called Indian paintbrush in full sunlight is the most emotionally compelling for me, as well as an outrageously difficult color to achieve in ceramics. The perfect complement to this shade of saturated rosy red on the roadside is the mustard-colored brown-eyed Susan. Since I have been unable to achieve the same bright tones, I settle for slip and glaze layers that satisfyingly conjure a similar color relationship, not unlike a ripening mango surrounded by an intense green. Most of the green foliage where I live is uninspiringly dull, so I prefer to evoke the emerald lead-glaze greens commonly found in folk pottery.

A glaze that creates layers of depth is enchanting to me, not unlike staring into a wonderland of polished opals or agates. Terra sigillata emphasizes the texture, revealing how it was handled in making, and adds streaming veils under the glaze. Left bare in occasional spots, the sigillata evokes the leathery skin of the clay. My pieces are delib-



erately asymmetrical in form, to give the appearance of something moving or turning, and it takes me almost as long to glaze each piece as it does to make it. The kiln is stacked so as to allow the glaze to flow in certain directions appropriate to the pot. This stacking is similar to an anagama firing, in that I am using the heat to move the glaze materials so that glaze drips create lines amid other random coloration. The glazes are organized like wildflowers in a field, with flowers blooming where seeds scattered themselves.

My eye naturally gravitates toward things that have certain intense colors or well-considered color relationships. It has taken me more than a decade to become my own favorite potter, but I now prefer works from my studio for the table. When I dine, the plate I made is exactly what I want to see under my food. A blooming garden or a luminous, clear grotto can be appropriate backdrops for a healthy meal, and are visually complementary to many recipes. When I use turquoise, I think of the clear blue ocean, especially in such spectacular places as the Isle of Capri in Italy, or along a coral reef. These colors create a strong emotional response, like satisfaction or relief, when I see them; perhaps they are comforting to me, in light of our increasingly polluted and fragile planet. Re-focusing attention toward healthier food production and de-toxifying our environment are values I work toward in other

aspects of my life. I do not enjoy garish colors used to attract attention to something undeserving, but intense color does have its place in nature: it sends important signals to butterflies, tropical fish, and humans. My work is a reminder to myself (and perhaps others) of the inherent connection between humanity and nature; it is color and natural beauty that remind me of our place in it.

Noted neurologist and synesthesia researcher Dr. Vilayanur Ramachandran states that in his experience, artist-synesthetes do feel color to be meaningful in their work.⁷ For example, Wassily Kandinsky, a music-color synesthete, felt that individual colors had spiritual importance.⁸ The Russian composer Alexander Scriabin thought that the synesthetic visualizations accompanying his compositions were important enough to replicate with colored lights during concerts so the audience could experience a similar feeling,⁹ and Olivier Messiaen created passionate music based on color visions brought on by the extreme hardship he experienced in prison camps.¹⁰

There is a history of artists being motivated by their various synesthetic experiences; Dr. Ramachandran estimates that synesthesia is seven times more common in creative people than in the general population.¹¹ My belief is that the heightened sensory input experienced by synesthetes, combined with a feeling of significance the experience



imparts, motivates us to explore and express these sensations. I do not think synesthesia alone motivates people to be artists, but if one is inclined to produce art, then synesthesia would probably be a significant influence.

Since becoming aware in the late '90s that there were a name and some norms for what I experience, I have discovered other artist-synesthetes. We can usually recognize each other just by looking at our work (though I will add that I have met many people who are similarly ardent about color who are not synesthetes). As a group, synesthetes tend to be more acutely aware of color relationships and to think about color more, likely because of the intense emotional response that is associated with particular shades or tonal combinations. We wish to re-create for others (and ourselves) artworks that give us that emotional exaltation.

In recent decades, the teaching of color in ceramics has come full circle. In the '60s, Jun Kaneko once asked his teacher Peter Voulkos why the class glazes were so ugly, and Voulkos replied that one had to make really good pots to make such bad glazes work.¹² To me, this story illustrates the former prevailing ideology – in spite of which Jun somehow became a marvelous colorist. A better approach, I think, is to address the overwhelming effect of color on pots early on, and to give students some practice manipulating it. Betty Woodman used to come to

critiques with a brush and some stain and teach how to “change the shape of the pot” with color. It’s fine to tone down the color in order to bring more attention to the form when necessary, but the student will be cheated if glaze color, meaning, and chemistry are inadequately addressed due to some prejudice toward “pure” form. Potters’ “paints” are melted stone and have a visual language and history that is very distinct from paint, plastic, etc. I will never forget the enthusiasm in Walter Ostrom’s voice when he exclaimed about glaze, “Painters would *kill* for these colors!”¹³

To plan for both form and its coloration is a challenge for a student at the outset of making a pot, because this is like adding skin or clothing to a form. As if that were not enough, potters must be chemists and make their own colors! Lastly, pot and glaze are only a part of the final picture; students making functional pottery need to be thinking about the food and the tonal relationships that might occur when the piece is in use. It takes much practice to see the color and glaze aspect of a pot and know what it is doing to the form. I find that I must live with my work, in the cabinet and on the table, in order to fully see what I eventually find out about the success or failure of a glaze or color combination.

I am always surprised when others tell me that they have positive emotions when using



my pottery, because it's so personal to me. Many artists, synesthetes or not, create to the best of their abilities their truths, which are amazingly unique to them and yet, perhaps in unrecognized ways, universal. I will continue to explore the color marvels that my synesthete's eye craves. The mysteries of color and its attraction have not been completely unraveled, but that does not mean that one should not intelligently investigate them.

NOTES

1. Cytowic, p. 5.
2. Mollon, *Color Perception*, pp. 10-11.
3. Pinker, p. 191.
4. Mollon, p. 134.
5. Mollon, p. 135.
6. Pinker, p. 191.
7. From a conversation with the author, NCECA Conference, March 17, 2004 Indianapolis IN.
8. Kandinsky.
9. <http://home-1.tiscali.nl/~cretien/pub/syneng/htm>.
10. <http://www.oliviermessiaen.org/messbiog.html>.
11. Ramachandran.
12. Statement made during workshop "A Weekend with Paul Soldner & Jun Kaneko" at Anderson Ranch, Snowmass Village, CO, August 20, 2006.
13. From his speech at the Utilitarian Clay Conference III, Arrowmont School of Arts and Crafts, Gatlinburg, TN, September, 2000.

For more information on synesthesia, here are some helpful websites:

- http://en.wikipedia.org/wiki/Synesthesia_in_art
- <http://synesthesie.nl/>
- <http://www.ringsurf.com/netring?ring=synesthesia;action=list>
- <http://psyche.cs.monash.edu.au/v2/psyche-2-10-cytowic.html>

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