Catching the Light: “Doing Art” and Education

Margot Grallert

The experience of art depends to some degree on our experience with art as children in school. When I was a child, being able to draw meant that one was “good at art” and I could draw. However, it was through painting and other color media that I found a way to talk about how I think. In my experience as a visual art consultant in an elementary school for many years, conversations with classroom teachers about how children work with color media led to an understanding of artistic literacy as a way of thinking.

The purpose of this paper is to promote scientific research as it applies to “doing art” in basic education. Two particular aspects are especially relevant:

1. The influence of “doing art” on learning, and
2. How the use of color media in visual artwork facilitates the individual expression of that learning.

What follows supports the need for this kind of research. By stimulating scientific interest in exploring these issues, I believe that the value of artistic thought can be made visible not only in what we see but in how we see.

LIKE MINDS

From 1971 until 2005 I was the “humanities consultant” at McCarthy-Towne, a public elementary school in Acton, Massachusetts. My role was to collaborate with teachers on the integration of visual art throughout the curriculum in the regular classroom. We worked to interrelate subjects rather than treat them separately, and the process of learning supplemented the more traditional focus on specific results. The artwork was prolific as well as profound in what it revealed about individual expression.

During my time at McCarthy-Towne, people often asked if I was still “doing my art.” In fact, I was never more artistically engaged. The expression of my art was related as much to my interaction with students and staff as it was to the act of painting. This interaction revealed connections between art-making and creative thought that continued to evolve in a manner that affected the learning environment of the whole school. The more we discussed what we saw in the visual artwork of students in process and in the product, the more we realized the value of the artistic thought process. At McCarthy-Towne, I witnessed what the German artist Joseph Beuys (1921–1986) spent a lifetime trying to articulate—namely, that the artistic process manifests itself as much in thought as it does in concrete form. It belongs to everyone and it is always interactive.

Beuys started out as a scientist and I as a painter, but both of us worked to bring the multidimensional experience of science, art and education to a broader audience than could be reached in their separate domains. Our meeting of minds was in the value we both placed on the individual thought process behind doing art regardless of the form that an artwork might take. As artists, we both adapted to the culture of our time by defining the singular and most important value of artwork in terms of the artistic thought process in and of itself. An overview of Beuys’ work follows because it gives perspective to my own experience as an artist in education.

Beuys’ art was influenced by the chaotic period that followed World War II in Germany, when he tried to rouse people to take action in determining their future. He wanted them to become artistically literate in their behavior, that is, to think independently and act decisively to bring about change after a war that left many feeling passive and helpless. His work was more a matter of eliminating boundaries he believed were imposed by attitude and altering assumptions about the meaning of art than it was a question of how art with a capital A could enrich people’s lives in any external manner. Beuys practiced his art in a larger public arena; thus it had an impact on the culture of art outside museums. Artistic change eventually influences culture on many levels, but it has yet to affect the hallowed halls of education. I was not familiar with Beuys’ work while I was at McCarthy-Towne, but what he did and said gives me a way to describe how the work of teachers and students in this one school offers an educational model that applies to the art and culture outside its walls.

Beuys became an artist after an initial interest in the natural sciences, when he realized that the purely rational direction of scientific studies at that time was too limited. Instead, he pursued his love of drawing, watercolor and eventually sculpture, finding that through doing artwork he discovered more of what he had first sought to pursue through science: discoveries about living forms that were active and unpredictable in a dynamic of continuity and change. Three-dimensional form gave him a wider perspective than what could be seen within the limited edges imposed by paper. Beuys often spoke of how...
difficult it was to use a two-dimensional surface to illustrate what he referred to as the transition from “chaotic energy through action to organized form” [1]. His ideas were not about how to get directly from one place to another. Rather, he wanted to fill a gap in the minds of ordinary people between the poles of rationality and creativity, reason and intuition, art and life. The German expressionist Marianne Werefkin referred to art as a hyphen, seeing it as a “thought taking form” [2]. Beuys recognized this in-between place in choosing materials that best illustrated change and transformation. He worked to raise awareness of the circular nature of life and death as a message of hope in which time played a leading role.

He demonstrated his ideas by using ordinary materials rather than art materials. Materials such as living or dead animals, oil and fat and honey, placed along with what might be considered dynamic elements such as heat, water or electricity, allowed him to illustrate transformation as a natural function. Rational thought was represented by concrete static form that could only be influenced by dynamic force, such as when a geometrical and articulated honeycomb becomes liquid in the honey itself. He did not, however, abandon the materialistic nature of art. Rather, he used it to encourage a different way of thinking about art. That was, as he explained it, about “seeing things which we do not see now; it means not seeing things which at present we do see” [3]. He referred to art as a question mark: evolutionary in method, revolutionary in aim. Eventually, he acknowledged that it was only through education that evolution could happen. Beuys used concrete materials in live performance to demonstrate an artistic process of thought, his goal being to educate his audience to think like artists; in other words, to think for themselves. He saw that the basic and fundamental aspects of living were “crying out to be shaped and created” [4], because the idea of culture was severely limited to what was in museums.

Beuys felt that the only way to make cultural change was to work within a polarity of rational and artistic thought through a collaborative and creative experience, and he used the political and cultural climate of his time to do that. He believed that sharing the experience of a visual and performing art was a way to witness a changing, fluctuating phenomenon in relationship to anything fixed, mind or matter. In recognizing the power of engagement, he worked to communicate the fact that the work of art or the work of science is never separate from ordinary human experience; not over, never finished. Whether inciting, intriguing or demanding, his efforts were to engage the audience—mindfully.

Both Beuys in his time and I in mine aimed to inspire independent thought for self-direction in our respective cultures by acting on and within them. We shared a teaching behavior in demonstrable and collaborative performance with others similar to interactive art forms today. He shared his artwork with his audience in the streets of post–World War II Germany. My own artwork was created with teachers and students in an elementary school. The effect he had on the artistic climate of his time was similar to the effect artistic behavior had on the educational environment of McCarthy-Towne in the years I was there. Beuys believed it was necessary to confront his audience because the times demanded it. My method, in the context of education, was mediation. In both cases, we were the go-betweens.

The challenge for me was in finding a balance between the facets that fractured my own way of thinking as a visual artist in a school community and then to find a way to make that balance visible. Dialog with teachers helped me find words to fill the gaps and resolve what we all saw as an educational divide between thinking and doing in art or any curriculum. Conversation became as inspired as it was practical, balancing reason and creativity in a school where both had equal footing.

“DOING” ART

The language of visual thought can best be seen in its relationship to art as education rather than simply in education. The word “as” is the operative word in the previous sentence. “As education” addresses a way to understand art in a way that goes beyond the definition of forms that we tend to use in discussions about art, while still including the process of learning that generates these forms. “In,” as in “integrated arts,” relates to specific curriculum and materials segregated by lines of definition. The fuller meaning of art as mindful experience might be understood by seeing it first without any particular form.

Most of us would probably agree that artwork of any kind requires experience through participation, regardless of form. Creativity can be private, but the fulfillment of artistic purpose requires collaboration—always. The idea of art with a capital A, as something separate from us, is changing to one of inclusion in our culture at this time. Terms that define separate forms are less clear now, as multimedia, performance-based and interactive arts offer more reference to behavior than definition. Culturally, much is happening in bringing together not only artists and audience but the interaction of all art forms as well. Meanwhile, decisions about education are based on tests of prescribed uniformity for separate subjects. Administrators place the value of art education in the product rather than in the artistic thought process itself. The meaning of artwork is difficult to explain in a literally oriented public school environment, whereas the permanence or impermanence of art forms is no longer so distinct in the art world. We learn to segregate and categorize what we are and what we can do by what we learn in school, becoming disinclined from doing art because of an inability to make the outcome look like what we intended. Performance artists, I believe, will change that perception over time.

Their collaborative relationship gives an all-inclusive meaning to living art forms previously considered separately in genres of theater, such as drama or comedy, classic or modern dance, or music through the eyes and ears of musicians and composers.

Meanwhile, visual art in schools continues to be most often a matter of using line and color in a static and mostly 2D format. However, the value of the art product might be assessed more comprehensively by means of the very fact that it is so static. The art piece itself can be considered the hyphen Werefkin refers to because it offers a third perspective, a point of reference we can come together on through the oral and written language we have in common. The difference between “Art” in museums and art as education is that the latter works in living time. Also, because education deals with the growing minds and hearts of children, the behavior of visual literacy has everything to do with that development. At McCarthy-Towne, static form offered a reference point for conversation related to behavior as well as aesthetics. We recognized that the artistic thought process lay in the aesthetic quality of the visual work and that this work was always in relationship to something, to oneself or to someone else.

Although the seed-like essence and crux of the matter for both Beuys and me was to include our respective audiences as participants without letting the materials get in the way, the task for Beuys was
to eliminate fine-art materials to enable people to think and behave artistically. Equally important at McCarthy-Towne, however, was the quality of the Art with a capital A. Behavior was one thing, but, educationally speaking, that behavior could not have reached its central place of value without the artifacts themselves. Beuys got people involved by using 3D form outside of museums, which confined and defined who did and who did not do art. For me, at McCarthy-Towne, it was through the use of color.

**Personally Speaking**

In 2002 I received a grant to revisit sites in Italy where I had painted as an art student in 1958. Part of the reason for my return was to practice what I preached at McCarthy-Towne, where I stressed the importance of individual style and perception in student artwork. A unique quality in each student’s work was usually evident regardless of medium and often remained consistent throughout the students’ years at McCarthy-Towne. I found that my own artwork from 1958 revealed the same consistency.

In placing photographs of the Italian sites from 2002 alongside photographs of the paintings I did as a student, I was pleased to see the colors amazingly similar in both. I also painted 24 swatches of all the colors I saw in 2002, reflected as much in the stone streets and buildings as they were in the countryside. Twenty-four, for some reason, seemed to reflect comprehensively what I saw in the light and landscape of Umbria. In other words, I made an observational, analytical and intuitive judgment that 24 was enough, and I did not foresee any other use for these swatches, except possibly in collage later on (Color Plate D). The value of painting these very specific colors on separate 3×4-inch pieces of paper was in the perspective they now give me about my own approach to art and the focus of this writing.

The mixing of the colors was controlled: one pink, eight very close shades of orange and salmons, six not quite as close of very dark browns and greens, seven bright and light greens, one yellow and one blue. The colors, as segments of a whole, describe a visual analysis I was not conscious of when painting them. It was a step-by-step process, it was one of deciding what to do next, rather than predetermining what I needed or why I was painting these pieces in the first place.

Quick drawings from sketchbooks might be seen as ideas to be worked on more fully in a finished art piece, and that is what I considered these swatches to be. However, they are not quite the same because, unlike the loose forms of most line sketches, they are unrelated and independent of each other. Their contribution to a comprehensive view of the Umbrian landscape was in how their edges affected each other. Only in blending through their divisions did they have meaning, and only in this kind of blending is there balance in doing, finding and knowing art in experience.

Color has many material applications to the idea of blending: literal, of course, but also figurative. Rather than delineating it covers spaces. Pieces of color are used as shapes and textures according to how they work best together in collage artwork. However, in jigsaw puzzles, there is just one place for each piece. Whether by choosing where to place the pieces or finding where one piece belongs, both ways work to resolve something through relationship.

One thing holds true. Conscious and unconscious choices need to work collaboratively for thought to be seen comprehensively in the art that results, including the controlled and non-controlled aspects of observation. Insights about my experience of color came through painting, that is, through doing artwork. In finding the same colors in Italian stonework as I did in the natural landscape, I began to focus on the stonework itself, which in turn led me to more fascination with the worn mosaic floors than with the frescoes on a tour through the Vatican Museums. Patched places in the Sistine Chapel were just that, simple repairs to blend surfaces visually and make them smooth for walking. New stones and tiles sat side by side with the originals, but they were clearly independent. People seeking an authentic art experience came to see the restoration of frescoes, probably unaware of their participation in the art of the floors beneath their feet.

The dynamic relationship I saw between the life of stone and that of art in Italy illustrates the role I saw classroom teachers play in the lives of their students every day at McCarthy-Towne. The teachers approached their art with the innocent hope, despite the system’s focus on standardized tests, of being immersed in an unpredictable encounter with students who would lead them in unpredictable ways every day. The living value I found in the concrete nature of stone was also, I believe, illustrated in the more deliberate effort of painting the swatches of color. Both experiences describe the value of balance between conscious and unconscious thought as artistic behavior, of equal importance to teaching and learning as it is to artwork. Visual artwork was the reference for thoughtful expression in student artwork at McCarthy-Towne. Students too were often unaware they were “doing” art, because the doing became what was expected of them.

The purpose of the grant in 2002 was to fully immerse myself in doing artwork, but I felt compelled to monitor and control what I did so I would have something concrete to show on my return. I see now where intuitive and creative thought came together in how I honed the perhaps more analytical task by simply making a palette, not a picture.

**Professionally Speaking**

There were no specialists at McCarthy-Towne when the school began. It was founded in 1971 by a group of educators and parents hoping to inspire self-motivated and independent learners in a school where all worked together on the environment as well as the curriculum. As the humanities consultant for the integration of art in the regular classroom, I had only two questions: First, how could the concrete visibility of art objects make a difference for teachers and students beyond the products of art? Second, if being in control mattered, how could we honor non-control in an educational context? These questions and the evolution of the humanities/art program are addressed in an article I wrote for the *Harvard Educational Review*, wherein I describe the integration of art with other aspects of the curriculum [5]. I describe how the materials and directions for their use were implemented in a way that allowed students to interpret 3D experience in a 2D format because 2D materials were most appropriate for independent work at art centers in the classroom. Three conditions were basic to the success of this program: the use of color media rather than line tools, discussion about the artwork in process and as product, and flexible time for students to work.

As mentioned above, the integration of art related to a curriculum is one thing and the educative process of doing it another. The intuitive and unconscious
nature of visual thought remains silent, internal and difficult to understand unless recognized in an educational context. Although the use of color provided a flexible and multidimensional medium for thoughtful expression, student discussion about what they discovered in the process and saw in the product of art was just as critical to what and how they learned at McCarthy-Towne (Article Frontispiece). The realization of my own learning through painting in Italy came through self-reflection. That realization for students came through interactive conversation at art centers as they worked or in whole-class discussions about the work. Using thinking similar to my limitation of my palette of colors, I limited materials for art centers to suit the observation, which in turn helped to focus the dialog. Limits in a 3rd-grade center for painting skies, for example, were simple at first, but they suggested unlimited possibilities.

My palette of 24 colors was taken from a complicated landscape, whereas the classroom window framed a segment of sky (Fig. 1), and only blue, red, yellow and white paint were needed to mix color and texture. Students used paint similarly in their first 4 years at McCarthy-Towne, learning to trust what they could do with it in a balance of control and spontaneity, but it took time. The observation and materials were limited and center times were scheduled, but how often students painted and how many paintings a student did were flexible (Fig. 2). Each student painted anywhere from 2 or 3 to 8 or 10 pieces, depending on interest and other classroom requirements. Although paint was familiar to them, its behavior was always a surprise, and conditions for its use depended on the observation. With sky painting, students discovered that mixing too many colors and using a dirty brush made the paint turn muddy, resulting in a subsequent loss of the sense of light in a daytime sky. Similarly, too much water meant a loss of control. The balancing act was to collaborate with eye and hand mindfully to catch the moving light of a living sky at a particular time in any school day. If the sky was overcast, one student might catch the moisture and the heat, but not the sunlight breaking through. Another might catch the texture but not the weight or the sense of a changing weather condition. This kind of capture just happens. Educationally speaking, what the student learns through doing artwork remains silent in that work unless it is witnessed by others and given voice through what they too can see in it.

Students fine-tuned their perceptions of what determined the difference between cold and cool, warm and hot, or stormy and still in this 3rd-grade study of weather patterns, a science curriculum, as well as how these abstractions might be understood when applied to other curricula such as astronomy in 4th grade or Native American and Greek mythology in 2nd and 5th grades, respectively. The 3rd-grade sky-painting center started at the beginning of the school year and remained for two months. It led to a center for fantasy skies or skies based on a particular time of day or weather, a sky-writing center where students described one painting chosen by the class, identification of painters by how they painted skies in a study of Impressionism from January through March, and landscapes or cityscapes applied to skies in the spring.

The value of visual artwork gave life to the curriculum, including science, because the indispensable dimension of unconscious artistic thought was encouraged and honored. Students, teachers and parents looked at student artwork as living performance while witnessing how the visual art influenced and educated all of us. We learned to talk about the artwork without pulling it apart. Fact and fiction or craft and expression were integral to overall behavior, and we saw how and why we could identify ourselves in doing art and in observing it.

Although I used to see myself as a fence sitter between art and education, I now like to think of myself as being in a place of synthesis. Vittorio Storaro beautifully describes this as a penumbra, a place that “illuminates everything with suffused clarity.” It sits between darkness and light in a shadow space not defined by either, “giving our feelings a sense of continuity, our emotivity a sense of hope, our intuition a sense of Evolution” [6].

**Back to the Future**

Artwork, like the work of science and education, is about problem solving, be it a kind of intuitive analysis as I de-
scribed in doing the paint swatches or in searching for the one puzzle piece that fits in a particular spot. In the case of classroom work, the problem is still usually worked out on white paper whereon only the marks contribute to the direction taken and the results that follow. Not so with artwork. The space worked on is as important to artwork as what is done on it or to it. Good composition in writing relies on how well the words are put together, but it has no relevance to the paper underneath. The underneath or background is literally essential to good composition in art. In other words, artistically speaking, the marks made are no more important to the work than the space left unmarked.

Kindergarteners know this. They paint their names as part of their paintings across the paper in an integrated manner. They learn to segregate a comprehensive mind in flux when they begin to identify art as art and words as words, subsequently relegating their names to a specific place like the bottom or corner of the painting. That, of course, is a function of learning to read and write. However, an overemphasis on reading and writing raises the problem of how to keep the mind working as one. Visual artwork does this. With artwork, it is the blending that counts. However, divisive segregations between all facets of life continue to be strongly set in art, science and academic or creative thought—even in thought itself.

Visual artwork offers evidence of individual thought as the vehicle for the mind’s expression, but the heart and mind provide the translation. With the help of neuro- and cognitive scientists, we will soon see how an artist actually thinks. Margaret Livingstone writes about two visual areas of the brain that, although related to artistic vision, are completely separate from each other, “as anatomically distinct as vision is from hearing” [7]. She refers to one as the “where” system, an area that only sees luminance or differences in light, but is virtually colorblind. It denotes depth, three-dimensionality, movement and space, but not color. The other is the “what” system. It responds only to colors as defined by where they sit next to each other. All mammals have the where system, but the “what” she identifies as an evolutionary development or “primate add-on” [8]. To my mind, the “where” relates to spaces or areas in visual artwork, whereas the “what” simply identifies them by giving them names. I like to think it was the where system that helped me see differences of light, such as the eight shades of orange. Maybe these shades made sense when I saw them as “whats” identified as orange, light orange, salmon or peach, etc., when they bordered the other 16; and maybe, through analysis and application, that is how I was led to observations totally unrelated to art.

Fig. 2. A 3rd-grade student with two of his sky paintings. (Photo © Margot Grallert)
Livingstone’s analytical bent seems to sort things out. I much prefer Semir Zeki’s more holistic approach, because he identifies a need to look at the products of art to understand artistic thought in and of itself. He is interested in the neurological function of artistic vision as it relates to aesthetics. Although his research at the Institute of Neuroaesthetics in London is specifically focused on people’s responses to visual art, what is of interest to me are his reasons. Why, he asks, has visual art been featured in all societies throughout human existence? How is the artist able to culle some essential quality from so much constantly changing visual stimuli to instill an artifact with lasting appeal for generations to come? [9]

What if, with the support of science, individual artistic thought could actually be seen? How might that influence thought in education as well as other fields? Can vision become understood as a collective as well as an individual responsibility? Educationally speaking, the pervasive activity of vision in the brain as identified by Zeki and Livingstone places the science of artistic thought where it can indeed serve education, because how we see what we see relates quite specifically to education at its most basic level.

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I am grateful to the Calderwood Initiative for a fellowship to work on this article at the Boston Atheneum in 2006–2007. My plan now is to use slides, original student art and writings as well as teacher commentary in a multimedia presentation to show how education through art was applied at McCarthy-Towne between 1972 and 2005. I look forward to hearing from scientists who would like to collaborate on developing a model for presenting this data.

References and Notes
Unedited references as provided by author.
8. Livingstone p. 38.

Bibliography

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