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An Interview with Dr. Betty Edwards

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Abstract

Betty Edwards is Professor Emeritus in Art, California State University, Long Beach. She has been profiled by the Los Angeles Times, the Seattle Times, Time Magazine, New York Magazine, Intuition Magazine and has been a guest speaker at art school, universities, and major corporations, including IBM, General Electric, Roche Pharmaceuticals, Pfizer, Disney Corporation, UCLA Graduate Dental School, Steelcase, and McKinsey and Company. She currently lives in La Jolla, a coastal town just north of San Diego, California. She holds a doctorate in Art from California State University in Long Beach from UCLA and has been Director for Educational Applications of Brain Hemisphere Research at California State University in Long Beach, and has been Associate Professor in Art at Los Angeles Community College, and has also been a designer, a painter, a medical illustrator. Her books include: Drawing on the Right Side of the Brain, Drawing on the Artist within, Drawing on the Right Side of the Brain Workbook, Color: Mastering the Art of Mixing Colors and her major books have been translated into 18 foreign languages. In this interview she responds to the most salient questions about her life and her work.
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INTRODUCTION

1) MS/CKK: From reading your book, *Drawing on the Right Side of the Brain,* it's easy to see the importance that all your techniques can play in cognitive and even meta-cognitive development. If it were completely up to you, how would you implement all these techniques in the public schools?

Dr. Betty Edwards: This question touches on my life's goal, which has been to reinstate the teaching of drawing in public schools, not just for enrichment or entertainment or for training artists, but for the purpose of teaching students how to transfer to other subjects the perceptual skills learned through drawing. This has been my lifelong goal. I'm clearly not going to reach it because schools are still eliminating art classes and music classes. Art programs in public schools have been gutted, but perhaps one day they will come back.

2) MFS/CKK: Who is your favorite artist and why?

BE: My favorite artist is the eighteenth-century French artist, Jean-Baptiste-Siméon Chardin, who lived from 1699 to 1779—a long life. Chardin is known among artists as a painter's painter or an artist's artist. Chardin often painted ordinary things like pots and pans or onions and leeks, but his paintings, I think, ultimately affect viewers like me largely because of their underlying composition. His compositions are both complicated and simple. He echoes motifs by repetitions of angles and ovals, verticals and horizontals, curves, and shapes. When you consider masterful color and masterful painting techniques, Chardin's paintings convey a kind of—how shall I say it?—quiet repose. Looking at a work by Chardin can put the viewer into a deep meditating mood, because in this perfectly composed world, everything fits. Everything feels right. And somehow, I think he was searching for a form of visual truth. Somehow, he was able to put that search into his paintings.

Chardin's work is actually not very well known among American museumgoers, but I was fortunate to view a large, rare exhibit of Chardin's work in Cleveland many years ago, and I've just never gotten over it. So there you are. I've just never gotten over it.

3) MFS/CKK: Very tough question, how would you, or how do *you* define art?

BE:That is a very tough question given the state of art in modern times. The American writer Marshall McLuhan once said, "Art is anything you say is art." In a way, that's where we are with art today. Art can be a dead shark in a tank of formaldehyde, or it can be Jackson Pollock's drip paintings, or it can be a Chardin still life. It's an extremely difficult question. For myself, I think art is any deliberate aesthetic work—I guess I would just leave it there—a deliberate aesthetic work. That's not to say I like all contemporary art, or respond to it, but I respect what the artists are doing.

4) MFS/CKK: Let's follow up then. The beauty of death, the beauty of perspective, the beauty of profile: why do we find beauty in these things?

BE:This is also a very difficult question! Who wrote these questions?

MFS: Cynthia and I did.

BE: They really are very deep questions. This one touches on the so-called aesthetic response, which can be described, in simple terms, as the feeling one has, say, on seeing a rainbow—a feeling of being transported to a sort of exalted state. Now, the aesthetic response is a very slippery concept, to the extent that even the spelling of the term is not agreed upon. It is sometimes spelled "aesthetic," and sometimes spelled "esthetic." It's a rather undefined term about which volumes and volumes have been written. So, what is it that causes the aesthetic response? If we look back to the earliest paintings of bison, horses, and lions by prehistoric cave artists 30,000 years ago, the paintings are so beautiful that one can only conclude that the earliest humans must have experienced the aesthetic response, and that response continues on to this day.

To experience the aesthetic response is always pleasurable. Therefore, each of us perhaps seeks the special things that cause the response. Thinking again of rainbows, Wordsworth's lines express the heart-leaping pleasure:

My heart leaps up when I behold

A rainbow in the sky. . .

People seem to seek it out, and what causes one person's aesthetic response may be different from, say, mine or yours. It could be a gorgeously painted motorcycle, and people who are drawn to that art form talk about how they love it, and in what way it is beautiful; they go into rhapsodies over it.

So, it seems that there is a generalized human response to what we call beauty, and it can be triggered, as in your question, by the beauty of death, the beauty of perspective, the beauty of a person, the beauty of a flower, or by the beauty of a Chardin painting or by a superbly painted motorcycle. For a painter, the aesthetic response becomes ever more refined, as it does for an architect, a sculptor, a musician, or any art practitioner. And, as Wordsworth shows us, it's the same response for poets and writers.

5) MFS/CKK:What is the allure, then, of negative spaces?

BE: Let me tell you what I think it is. First of all, negative spaces and positive forms together create unity—a unified field. Of all the principles of art, unity is the nitty-gritty, the principle that imbues, for example, Chardin's paintings; it is the basic requirement for great art.

Here is an illustration of unity that I've presented to students. Call to mind one of those paperweights of glass that have objects embedded in them—flowers or seashells or butterflies—where the edges of the flowers or shells or butterflies are fused into the glass. Within that circular form, the glass and the thing embedded in the glass are unified. The glass is the negative space and the objects are the positive forms.

We, living in the world, are separated by air, but air has volume and substance and is our negative space. In a sense, therefore, we are all unified within that air/ space of the planet. The air that touches the edge of me links me to the edge of you. I think this is the allure of negative spaces. They remind us that, within the surface of our planet, we are all unified.

6) MFS/CKK: Logically define for the non-artist "logical lights."

BE:It's a kind of inside art term. It simply means that we as humans experience lights and shadows as *logical*. We know and expect that as sunlight falls on a form it will light up the near side of the form and create a shadow beyond that form, and that as the sun or the light moves across the form, those lights and shadows will change. As humans, we expect that to happen in a "logical" way. In realistic art, artists duplicate this "logic" of light and shadow.

7) MFS/CKK:In drawing the cup, is it important that the cup is half-full or half-empty?

BE:I think that's a rather tricky question. It really doesn't matter, but I'll tell you a funny thing about the drawing of cups. People who are unused to drawing are usually able to see and correctly draw the top edge of a cup as an ellipse—an oval shape. But they nearly always draw the bottom as a straight line, whereas, in perspective, the bottom edge would also appear as an oval shape. The reason they do that goes back to childhood; a cup with a rounded bottom would tip over. It has to be flat—a straight line. If you are alert to this, you often see this error in work by people who are quite highly trained in drawing. It's a very amusing mistake.

8) MFS/CKK: Over time, the drawing of the human figure has remained with us. Why is it such a perennial subject?

BE: I think partly because we, as humans, are always interested in other humans. Another reason is that the human figure is very complicated, moves in complicated ways, and provides, for an artist in training, an ideally difficult subject for which students have a high motivation to get right.

9) MFS/CKK:Do you *personally* ever draw on the left side of the brain? Consciously? Intentionally?

BE:I am constantly doing this in myriad ways, but not for drawing. The left hemisphere is not specialized for the function of realistic drawing. It would be like trying to write without using the verbal system. I am not a cartoonist, but cartoon drawing often uses memorized sets of symbols that can be repeated, much like the letters of the alphabet, and therefore that style of drawing is better suited to left-brain processes.

10) MFS/CKK:What do you think drawing and art would contribute to the education of our students, and how would you propose convincing teachers and administrators?

BE:Drawing is probably the best way to train perceptual skills—meaning how to see—and the act of seeing is undoubtedly involved in creative problem-solving and in just about everything humans do. Eyesight and seeing are surely among the most critical functions for human beings, but *seeing* is hardly trained at all. The reason seems to be that we all see pretty well and think that we don't need training in how to see—that it would not be useful.

In fact, human beings do not see very well. The brain itself makes assumptions about what it is seeing, and can actually can change perceptions to fit its assumptions. Your listeners may be familiar with the so-called "constancies," perceptual constancy, form constancy, and concept constancy. This means that the brain, which is always looking for easy ways to do things, makes quick assumptions about perceptions based on its previous knowledge. And often these assumptions are wrong.

Learning to draw can help to make one's perceptions fit more closely with reality. First of all, drawing teaches accurate perception—how to see what is *really* "out there." Second, perceptual skills learned through drawing can transfer usefully to other fields. For example, learning to accurately see negative spaces is useful in business problem-solving. In business, there is a term called "white spaces."

Writers of business books recommend that business problem-solvers look at the 'white spaces,' the spaces around the problem, rather than looking solely at the actual data of the problem.

Now, this is a difficult concept for someone who hasn't learned to draw. Once you've learned to draw, negative spaces become real—something you can mentally grab onto. And the other basic perceptual skills of drawing have equal value in terms of thinking and problem-solving, in business or in other fields. For example, the concept of edges—the perception of edges—which is one of the five component skills, carries profound meaning: where does one thing end and another thing begin? To return to business problem-solving, it is important, for example, to be able to accurately perceive the edge between the client's interest and the seller's interest. Where is that edge located? Is it moveable? Is it solid or permeable?

11) MFS/CKK:How does art capture emotion and feeling?

BE:In another of my books, *Drawing on the Artist Within*, I take up this subject. Somehow, human beings are able to intuit the *meaning* embedded, for example, in a drawn line. The speed or slowness of a line, or the darkness or the lightness of a line, can trigger a response—can be read as an emotion. For example, if we ask students to express anger by using just lines drawn with pencil on paper, with no

recognizable images or symbols whatsoever, in almost every case, students will use very dark, rapid, and jagged lines. Then, if we ask them to express joy, the lines they draw are lighter, smoother, circular, and rising.

This seems to be a basic ability in humans—humans untrained in the art of drawing—to draw and to "read" this non-verbal language of art. Artists use the language to express emotion, most basically with line, but also with shapes and color. Anger, for example, is often expressed in red and black; peacefulness or tranquility is often expressed in shades of blue; and so on. For whatever reason, human beings are apparently wired to respond to the languages of visual art.

12)MFS/CKK: What is happening physiologically when one is in right brain mode?

BE:Well, basically this goes back to the research of Roger Sperry and his colleagues at Caltech in Pasadena, California. Dr. Sperry received the Nobel Prize in 1981 for his work on the functions of the left and right human brain hemispheres. Simply put, his research corroborated what was previously known about the human brain, that the left and right hemispheres are specialized for differing functions: the left hemisphere for verbal, sequential, analytic functions; and the right hemisphere for visual, perceptual, global functions. But most significantly, Dr. Sperry's research demonstrated that *both* hemispheres function at a high level of human cognition, not just the dominant verbal left hemisphere, as was previously thought. Until Sperry's work, the right hemisphere, being largely without language, was considered the somewhat "stupid" half of the brain.

Ideally, in drawing, one tries to tamp down the dominant system, which is the verbal system, because it is unsuited to the task of drawing a perceived subject. By tamping down the dominant verbal system, the visual system (for most human beings most often in the right brain) is able to "come forward" to take over the task of drawing.

When this happens, there's a slight change of consciousness, as others report and as I've experienced, characterized by a lack of ability or wish to talk, a loss of the sense of time passing, and an intense focus on the drawing. It's quite an alert state, with a sense of being highly concentrated on what you are doing, quite the opposite of day-dreaming. This state also carries a sense of self-confidence, that you are up to the task, and a sense of being deeply engaged in the task. Mike, you've probably had this experience yourself if you've been working on a project. You can go on right into the middle of the night, with no sense of time passing, and you leave this state not tired, but refreshed.

13)MFS/CKK: For most of us, you say the visual sense has gotten flabby and out of shape. How do we revive or retrieve it, or is that the wrong question to ask?

BE:I'm not sure the visual sense has gotten flabby or out of shape. I think that the objects of our attention have changed. People are enormously alert, say, to movie techniques or computer systems. It's not that it's flabby or out of shape, it is that most contemporary uses of seeing, I fear—especially in our culture, American culture, western culture— mainly involve a quick naming of what we see. I fear that we are losing those slower ways of seeing *the thing as it is*, in reality, out there. Other ways of seeing—for example, through meditation in Eastern cultures—are not part of ordinary American life.

I believe this is one reason why, after our students have learned to draw, they often tell me, "Life seems so much richer to me now because I'm seeing more." Or they'll say, "I don't know what I was seeing before I learned to draw, but I realize now that I wasn't seeing very much. I think I was mainly just naming things."

Something is getting lost, I think, and it is, perhaps, an alertness to the complexity and beauty of the real world. This loss, I fear, is quite widespread in our American life. Certainly, in the corporate work that we do, leaders are seeking a broader vision, how to think out of the box, how to see into the white spaces, how to perceive edges, lights and shadows, how to see things in perspective and in proportion, and how to see the "thing as it is."

14)MFS/CKK: How do you think teaching your drawing techniques to lower-income kids would affect them academically?

BE:First of all, anyone can learn to draw. Like reading, it's a skill that does not require any special talent. Given proper instruction, anyone of sound mind can learn to draw. It's not as difficult as learning to read, for example, but, as with reading, you must have effective instruction. After all, everything you need to know in order to draw something is right there in front of your eyes. You just have to know how to see it.

For lower-income students, who too often experience failure in school, becoming skillful in drawing can give them a success in school that is meaningful and highly admired among their peers. Even little kids admire drawing skills. I think it would be helpful in that way. Also, I think that in our highly verbal, sequential, analytical left-brained educational system, right-brain modes of thinking are perhaps more prevalent among lower-income students. They depend a lot on intuition, I think, and intuition is not very useful in scoring high on standardized tests. It's possible that using more visual methods of teaching basic verbal and math skills would better suit the cultural background of lower-income students. Most important, the thinking skills learned through drawing can transfer to reading, writing, and arithmetic. An obvious example is the transfer of *proportion* in drawing to *ratios* in math. Perhaps less obviously, learning to see and draw negative spaces can transfer to understanding *context* in reading.

15)MFS/CKK: How do you share your conviction of the importance of teaching drawing?

BE:Well, I write books, mainly. In the past, I've been a very active lecturer in an amazing array of special fields, from business to dentistry to acting. Wherever I can promote the teaching of drawing, as in interviews like this, I do it.

16)MFS/CKK: This is a little bit of an exercise, and I'm going to use your quote from page eight, "We don't teach reading and writing to produce only poets and writers, but rather to improve thinking. We don't teach drawing and other forms of art to produce professional artists and sculptors," but rather to what?

BE:We should teach drawing to improve thinking, in the same way that we teach the three "R's" to improve thinking. There is no point to teaching the three "R's" and drawing only to produce artists or poets or writers or sculptors. Our American culture does not support the artists that we currently have. But we do need to improve thinking, and we're talking about, you know, the so-called "other half" of the brain. Due to Dr. Sperry's work and all of the research since then, it is now clear that the visual, perceptual right hemisphere functions with the same high-level of human cognition as the verbal, digital, sequential cognition of the left hemisphere. And we're hardly touching it; we're hardly teaching that side of the brain at all.

17)MFS/CKK: This is kind of a final big wrap-up question. What have I neglected to ask, or have we neglected to ask?

BE:That's a hard one. You have been very thorough.

MFS/CKK: Let's see what we can focus our next interview on.

One of the things we have learned through our work with students is that by learning to draw they learn how to control, at least to some extent, their own brain processes. If you are going to draw, you need to access the system in the brain which is specialized for seeing and drawing. We teach our students how to do that. In fact, all of our teaching strategies are designed to enable that access. Succinctly put, the basic strategy is:

In order to gain access to the visual, perceptual (mainly right hemisphere) functions of your brain, it is necessary to present your own brain with a job that your (usually dominant) verbal system will turn down.

That's why we do upside-down drawing. That's why we focus on negative spaces. The verbal brain half, finding that you're looking at "nothing" says, in effect, "I don't deal with nothing, and if you're going to do that, I'm out of here." "I don't do upside-down; I can't recognize and name things." "I don't do lights and shadows; they're too complicated and not useful." "I can't deal with ambiguous perspectives." "After I've named something, I'm done with it. Why are you still looking at it?" Etcetera, etcetera. This "bowing out" by the verbal system enables—or, better put, *allows* the right-brain mode to come forward and take on jobs that it is better suited for.

One of the key advantages of learning how to draw, therefore, is this added aspect of learning how to control your own brain processes, to be able to see what is really "out there," in all of its ambiguity and complexity. This ability applies widely to other aspects of life, not the least of which is creative problem-solving!

Summary and Conclusions

In this provocative interview, Betty Edwards has attempted to synthesize and elaborate on her years of working with art, and hemispheric dominance. She has responded to questions regarding some of the most discussed issues in art and hemispheric dominance. Those who want to learn more about these topics are directed to some of her books, some of which are cited below.

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