

THIS CREATIVE CLASSROOM

Kurt Daw

Assistant Professor of Theatre

When we are young and first learning to deal with pencil and paper we become interested in representing things. The difficulties of learning to draw at that age are immense, and so we learn a set of convenient “shorthand” symbols for things we wish to depict. A square with a triangle on top becomes a “house.” A circle with short straight lines radiating from it is the “sun.” “Man” is represented by a curious stick figure.

Of course, none of these crude drawings resembles the actual object. Without additional information we cannot tell which “house” is being represented. The symbol does not look like any specific house, it is an abstraction.

Later in life we begin to want to draw more accurately, and find it frustrating that our drawings are stilted and unrealistic. We are old enough to handle the mechanics of drawing accurately, but we find we still cannot get the result we want. We are trapped by the symbol-creating strategies we developed as children.

Somehow, a few “special” individuals learn to take the giant step forward to rendering objects as they actually appear to the eye, in the photographic sense. These people we call “artists” and hold their abilities to be special.

Only recently have we begun to discover what these “special” people do, and this information is very surprising. It seems that artists are doing something *simpler* than what the rest of us do. They are skipping the stage of developing a symbol. They are just looking at the objects and seeing them directly. They then copy down this information to the page.

It is quite shocking to find out that

an artist’s talent is not physical, but perceptual. Artists, in general, are not especially gifted in coordination or motor skills. They do, however, have extraordinary abilities in how they think about their problems. It seems they think in a mode that is quite foreign to that usually employed in the classroom. They think in an *alternate perceptual mode*, which for the time being let us simply call “creativity.”

Equally important, and very exciting for its educational implications, is the discovery that people can be taught to consciously *shift* perceptual modes, and when they do they develop significant creative abilities in a very short period of time. Most adults draw at about the same level of ability as they did when they were in the fifth grade, but shifting perceptual modes, they can learn to draw almost any subject competently, including portraits, in less than a ten-week quarter.

This extremely brief description of the development of drawing (fascinatingly explored at book length in *Drawing on the Right Side of the Brain* by Betty Edwards) is a paradigm which has provided evocative clues about the operations involved in solving a broad range of creative problems. Drawing is simply the clearest example because it involves only one perceptual sense — that of sight, and because the product is long-lived.

These excursions into the world of thought employed by creative artists has helped us to see creativity in a new light. We are coming to understand that creativity is a higher order mental process, similar to logic. Like logic, it involves the ordering of a great deal of information into a coherent structure. But creativity is both separate and different from logic.

Where logic deals with sequential order, creative thought deals with global patterning. Creative thought is a kind of “all-at-once” vision. Where a math problem must be solved sequentially, a

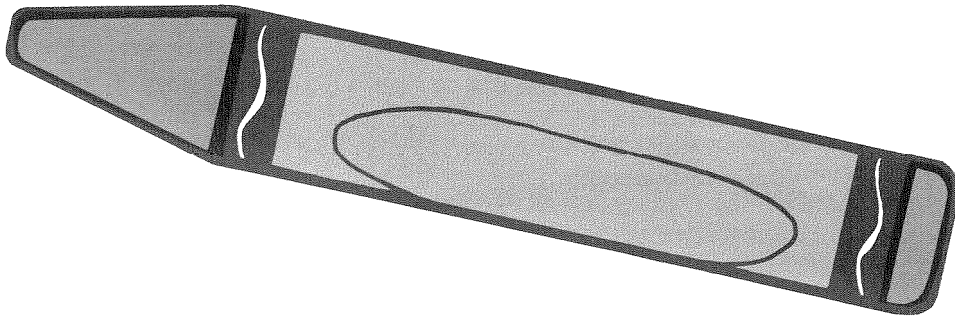
face can be drawn in any order. One can start with an ear, then skip to the nose, perhaps a bit of the lips, and back to the ear again. It makes no difference which order one chooses to complete the drawing.

Where logic is the ordering of abstractions, like words or numbers, creativity is the patterning of perceptual sensations, such as visual, aural and tactile data. Creative thought is non-verbal, simultaneous as opposed to sequential, involves synthesis instead of analysis, is spatial as opposed to digital, and deeply non-temporal.

The most important thing we have come to see about creativity is that it is an alternative mode of thought to the symbol-creating process of abstraction we usually employ in the classroom. In fact, it is suppressed whenever abstraction is operating. *One cannot operate creatively until freed from the process of symbol-making and manipulating.* (This seems to have a biological base. We know the lingual [left] hemisphere of the brain has dominance over the global-spatial [right] hemisphere. If the left hemisphere is damaged in infancy the capacity for language will move to the right hemisphere even if abilities usually associated with the right hemisphere are lost.)

From this new view of creativity as an alternate perceptual mode, comes a wealth of interesting ideas about encouraging and enabling creativity in our classrooms.

We can free students from the blocks caused by symbol-making by temporarily removing analytical concepts, especially labels. Artists can draw things better when they do not name the object they are drawing. (In fact, we can all reproduce line drawings with significantly increased accuracy by turning the original upside down so that we cannot tell what we are drawing!) To give a quick example, most adults have grave difficulty drawing “chairs.” The reason seems to be their aware-



ness that the chair's legs must be all the same length. But if you *look* at a chair, you will realize that the legs do not *appear* to be the same length. They appear in perspective. The leg closest to you seems much longer than that farthest away. In order to draw accurately you must override the logical assumption about the length of legs, and simply see what is there. *The label is in the way.* To artists the object itself is unimportant. It is a collection of lines and curves to be rendered onto paper. Similarly, we can sometimes commit ourselves to exploring problems non-verbally to arrive at new perspectives.

No creative thought will take place until all strongly analytic concepts are suspended. Especially significant in this regard is the importance of releasing the student from time-keeping. Students who are watching the clock are deeply involved in logical abstraction. Some instructors find it helpful to set an alarm clock in their classroom so no one is worried about the class running over. Similarly, it is difficult to process creatively if there is a strong time constraint for completion, which is one reason why tests so seldom bring out the creative qualities which we know our students to possess. The acting teacher John Lehne has a sign on his classroom wall to remind him to give the student time to formulate the problem sensorially. It reads, "Not the time it *should* take, but the time it *does* take, is the learner's need."

Removing the logical constraints gets our students out of one gear and into neutral, but there is still the step of going into the new gear, that is, making the perceptual shift. What we as teachers can do to help a student accomplish this is promote focusing on

the concrete sensation associated with the phenomenon being explored. Artists focus on the visual detail, for example, and actors on the tactile sensations of the environment in the play. But this process is not limited to the arts. In fact, the most convincing evidence for this has come, surprisingly, not from the arts but the sciences. The great conceptual scientists of our time share the common trait that they report they solve their scientific problems in visual images and only afterward translate their thoughts into words. Einstein, for example, reported that he pictured a box freely falling down a long shaft; inside it an occupant took keys and coins from his pocket and released them. These objects, he saw, remained in mid-air travelling along side the occupant. This, of course, is identical to the gravityless condition of space, but was to him more concrete, and from his musings he was able to abstract the information that became the basis of the general theory of relativity. *It then took him another year to develop the words and the math to describe what he already knew sensorially.*

Interestingly, evidence suggests that we work creatively best when the problem is very complex. This helps the shift to alternate modes. (This seems to be related to the labeling concept. If the problem is too complex for a quickly created symbol, we release the problem to the non-verbal, global processing mode.) Perhaps the best example of this is in everyday activity where we all suspend logic and move to global processing: freeway driving. We could not possibly drive if we monitored everything in a linear manner. "Car coming up on left at approximately 58 miles per hour, exit ap-

proaching in 1.7 miles, moderate traffic flow, and limited visibility due to large truck in front ..." We would go crazy trying to verbalize the details of the constantly changing state of traffic, but we make a shift to global processing and it is a snap. In fact, many people report that time spent travelling is quite relaxing and they are able to concentrate on and solve other problems while getting to their destination, almost unaware of the steps they took to get there.

One of the most difficult things for an actor to do is simply stand in front of an audience. Directors frequently ask actors to add an activity — say mime mixing a drink — to the scene they are verbalizing. In a similar way, classroom instructors can sometimes free up students by asking them to undertake an alternate activity while thinking about a problem. (How often have we had one of those "Aha!" moments, where we finally understood what to do about a problem, while we were engaged in some other activity altogether, unaware that we were even working on the problem?)

It is, of course, axiomatic that creative thought is not always, or even usually called for. Creative check-book balancing, for example, is an invitation to disaster. But when we want students to think creatively, in situations where we want the product to be distinctive to each individual, we can help them.

Often times, the final step is to encourage them to solidify their perception, and then switch back to symbol creating to record it. One is reminded of Mozart saying that his next opera was completed, all he had left to do was write it down. Aside from the miracle of his prodigious memory it illustrates that the recording was a separate step to him. Likewise, Hitchcock is said to have found the actual process of film-making boring, as he carried around a complete vision of the product in his head before he began.

Recent brain research has helped us to see that we all have alternative modes of thought, to which we unconsciously shift when necessary, such as in freeway driving. (This is a greatly simplified understanding of Roger Sperry's Nobel Prize winning work on brain lateralization). The educational excitement is the new understanding that these shifts can also be made consciously and applied to problems which call for highly individual solutions. ♡