

# What Do Children Learn When They Paint?



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Although art educators have an abiding belief in the benefits art activity has for children, the grounds for holding this belief are often less than clear. What is it that art activities provide to children? Why do children make visual images? What is it that nature provides and what is it that culture provides in the course of a child's development in art? But perhaps more specifically, what is it that children learn when they paint, draw, or make three-dimensional images? Questions such as these serve as the focus of this paper. In it I shall describe nine consequences or potential consequences for children who are given the opportunity to work with teachers of art. All of these consequences represent an attempt to answer the question: What do children learn when they paint? Before trying to answer this question, a word should be said about why the question itself is important.

Most art educators operate on the belief that drawing, painting, sculpting, and the like are good for children, but I be-

lieve few of us have formulated satisfying answers to the question of just why we consider it so good. Yet more and more people are asking for justifications for what we teach in the schools. Particularly as educational accountability becomes increasingly important to those who pay for the programs schools provide, the need to justify what is taught-but particularly in the arts-also becomes important. So from a pragmatic point of view knowing why children create and what they learn from working in art is important. But it is even more important for providing a kind of intellectual security for our work. We ought to be able to describe the value of what we do and place it within a framework for rationalizing the contributions of our work to the educational development of the students we teach. So let us start at the beginning. Let us ask what students learn when they paint, or sculpt, or draw. In short, what do children learn when they make visual images?

Perhaps the first thing that very young children learn is something that we often take for granted, namely they learn that they can, in fact, create images with material and that the activity of making such images can provide intrinsic forms of satisfaction. Knowledge that a person

can alter the world through his or her own actions is not something that is incarcerated in the cortex prior to birth: such knowledge grows from experience. The making of a mark on paper or on wet sand or in moist clay is an alteration of the world, the forming of a new entity. When children are first given an opportunity to use materials, this is one of the first things they learn, namely that their actions can have consequences. Furthermore, the actions that brought about those consequences can themselves provide a source of satisfaction. The realization that actions can lead to consequences is what De Charms calls "personal causation."<sup>2</sup> Developing a sense of personal causation is not trivial; it represents a disposition towards the world, one that says that "I can make things occur, I am not simply at the mercy of the environment." The satisfaction that is received from action is what Charlotte Buhler refers to as "function pleasure." The rhythmic movement of the arm and wrist, the stimulation of watching lines appear where none existed before are themselves satisfying and self-justifying. They are intrinsic sources of satisfaction. The importance of intrinsic sources of satisfaction is often drowned in schools that beseege children with stars, grades,

pats on the head, and other forms of extrinsic rewards used to motivate activity and to sustain "interest."<sup>3</sup> The token economy comes to replace activities that might have once been pursued for their own sake. Like sex, eating, and other basic functions, young children learn from making images that satisfactions inhere in the process of action and that they can be a source of personal causation, they can bring something into existence.

The second thing that young children learn is that the images they create can function as symbols. A symbol as distinct from a sign or signal is something that is intended to stand for something else. A sign, for example, might be the wetness on the pavement indicating that it had recently rained. A symbol, however, is a transformation of an idea into a public image that in some ways stands for it. Young children learn that the images that they are able to bring into existence can also stand for other things. First, images are made and then named, and later named and then made. In either case there is what Langer calls a "symbolic transformation"<sup>4</sup> occurring. The young child recognizes that visual concepts can be transformed into a public and stable form. To do this requires that two processes be employed. One, a child must form a visual concept of the object he or she perceives. Such concepts usually are the least conceptually ambiguous the child can form. Thus, the most telling view of a chair, a horse, or a person is imaginatively framed. Second, the child must invent a visual graphic image whose properties are in some way related to the visual concepts he wishes to symbolize. These public images are what Arnheim refers to as "representational concepts."<sup>5</sup> Thus we have a two-stage process occurring. First, the conceptualization of an image that articulates some object. Second, the invention of a graphic form whose elements in some way represent that image. This latter process is one of symbolization.

Now it is typically thought that the major function of symbols is to serve as a means of communication. While it is true that discursive language and pictographs do serve purposes of communication, Langer argues, and I think correctly, that symbol-making is first used to form consciousness, to articulate thought before it is used as a means of communication. She quotes Edward Sapir, one of the century's most able psycho/linguists as follows:

*The primary function of language is generally said to be communication . . . . The autistic speech of children seems to show that the purely communicative aspect of language has been exaggerated. It is best to admit that language is primarily a vocal actualization of the tendency to see reality symbolically, that it is precise/v this quality which renders it a fit instrument of communication and that*

*it is in the actual give and take of social intercourse that it has been complicated and refined into the form in which it is known today. 6*

What Sapir is saying here is that symbol-making, a process requiring abstraction and transformation of one thing into another, is a natural human capacity upon which thought and consciousness itself depend. To put the case this way implies that the roots of symbol formation are conceptual before they become public. To have ideas is, in a sense, to engage in a forming process in which conceptions are abstracted or created: that is, they are formed realizations. Given this view, the public manifestation of the image is a second order symbol, the first being the conceptualization itself.

Whether one embraces such a view or a less radical relative, the fact that children use the images they create as symbols for the world is clear. This activity is due to their need to construct a knowable world and later to convey what they know to others.

From the recognition that images can be made and that once made they can function as symbols, children learn something else as well. The third thing that they learn is that symbolic images can be used as vehicles for symbolic play. Children learn that the images and symbols they create can be used to transport them into a fantasy world, that they can create an imaginary world through the use of their own images and through them become a part of other situations in which they can play other roles.

For young children the taking of new roles through imagination is an important source of learning. It allows them to practice in the context of play what they cannot actually do in "the real world." It affords them opportunities to empathetically participate in the life of another. Given that egocentricism is the psychological condition of the young child, the opportunity to learn to empathize, to feel like, as well as to feel for, others is an important ingredient in becoming a social being. The symbols that children create and manipulate afford them opportunities to learn such skills. Empathy requires the ability to imaginatively project; art is a means for cultivating such an ability.

The fourth thing that children learn from making images is that the process of image-making requires the making of judgments<sup>4</sup> The forming of images, particularly those that in some ways are intended to correspond to some aspect of the world, is a structure-seeking more than a rule-abiding activity. To create structures, the child must invent and judge. Unlike those activities of which spelling is a paradigm case, the young child, like the adult artist, must judge the adequacy and quality of his or her own work. Although he might have criteria for making such judgments, he has no standards for none exist. A standard, as

Dewey pointed out so vividly in *Art as Experience*, is an arbitrary, fixed convention.\* In spelling, standards are clear: in the English language there are two ways to spell a word, correctly or incorrectly. In making symbolic images no such standards exist. The child must judge and in the process learn to exercise judgment in situations where standards are absent. This is no minor accomplishment, for it moves the locus of evaluation from the external to the internal. The child must learn to rely upon his or her own sensibilities and perceptions in order to determine the adequacy of the symbolic images he or she creates.

One of education's longstanding aims has been to enable children to think for themselves, to become intellectually independent, to develop autonomy of judgment so that they will not be manipulated by others. Yet, in how many fields are such opportunities afforded the young? And without opportunities what chance is there for potentialities to actualize and for learning to occur?

Much has been learned of late about the consequences of sensory deprivation on the perceptual development of animals. There are critical periods in the course of a kitten's development when the deprivation of certain stimuli, light for example, creates an irreversible loss of capacity. Living organisms are born with a capacity to perform a variety of functions provided the stimulus conditions are available for the neurons related to those capabilities to be fired. Once the critical period is past without appropriate stimulation of specific capabilities, the likelihood of recovering those capabilities, even if the stimuli are present, is small or non-existent.

What are those capabilities that the young possess that are never actualized because the needed stimuli for their use are absent? Consider, for example, a process in the making of judgments called "flexible purposing." Children may initiate a project in art with one purpose and in the process shift purposes in order to exploit an unexpected opportunity; a new image presents itself, an array of colors looks particularly arresting, one color has run into another color to create a new shape. To exploit such opportunities purposes must be flexible and judgment must be exercised. In learning to paint, children learn to judge and learn to be flexibly purposive. Such opportunities for learning are virtually absent in the learning of arithmetic, spelling, and to a large degree in early reading.

A fifth thing that children learn when they create images is that images can be related to other images to form a whole. The task of relating one image to another is another thing that is often taken for granted. Yet the perception of subtle relationships within a complex visual configuration does not occur naturally. I will never forget my early days in a life drawing class when my teacher taught me that where a figure was placed on a sheet of

paper was no minor consideration. I was so preoccupied with trying to create a persuasive rendering of the figure that I neglected considering the relationship of the figure to the ground. Young children also learn to "decenter" their perception of the images they create, to use Piaget's phrase. They gradually learn to shift from local solutions to contextual solutions in the way they order relationships on a two-dimensional surface. The ability to decenter perception, to consider relationships, not only isolated entities, is one of the conditions of maturity. Those who are immature focus on one item at a time. Long-term goals or second order effects are not considered. In spatial patterns, as in temporal ones, the child must learn to consider relationships as well. Having the opportunity to create visual images provides the occasion for such learning to take place, and the more sophisticated and complex the qualities in the picture, the more critical the teacher becomes in facilitating such learning. Thus, questions of balance, unity, color, and value become considerations through the guidance of the sensitive teacher of art. Human nature provides the potential, but culture contributes to its development.

Much of what goes on in schooling mitigates against such holistic and contextual thinking. Basal reading programs and programmed instruction often fractionate learning tasks so that the child seldom gets an opportunity to consider the relationships among parts, let alone have a hand in structuring such relationships himself. With increased tendencies to break up learning into discrete units reinforced by extrinsic rewards, meaning is secured from extrinsic rewards rather than from the construction of a whole whose relations themselves hold meaning for the child. When such instruction is salient in schools, art has a very special and particularly important role to play as a kind of educational antidote.

A sixth thing that children learn when they paint is that they can develop skills that make it possible for them to create illusion and to form images that are visually persuasive. Although the need to create symbolic images that articulate consciousness appears to be a natural aspect of the human condition, the skills with which those images are rendered are learned. Learning that skills can be used to transform ideas, images, and feelings into a public form is not trivial since consciousness is in part achieved through the public manifestation of what otherwise is evanescent and inchoate. The variety and sophistication of skills or techniques become vehicles for transforming those ideas, images, and feelings. It is by virtue of skills that the materials that the child uses become media for conceptualization and expression.

As children work with materials and have the benefit of intelligent and sensitive teaching in art, their power to conceptualize visual ideas and to use effective

means for expressing them increases. Their range for expressive visual articulation increases. Their "vocabulary" of visual possibilities expands, and they become more confident because they become more competent in art.

The development of competence is one of the major sources of self-satisfaction for children. None of us likes to display our weaknesses, and none of us likes to remain at the same level of ability after substantial experience in the field of endeavor. The greatest spur to further work and to the setting of higher standards is the recognition that we have made progress. There is something that we can do now that we couldn't do before. Unfortunately many children do not recognize the genuine progress that they have made in art. Seldom do they have the opportunity to compare their current work with what they produced earlier, and while I do not want to imply that the quality of the product is the only relevant consideration, it is one important consideration. Much of what children have learned shows up in their work, and when it does it seems reasonable to let them in on it. But to do that would require a radical change in the way we evaluate and display children's work. Instead of mounting mini-Metropolitan exhibitions, we should show children's work over a time, we would take colored slides, or keep portfolios, we would talk to children about a body of their work, and when we displayed the work for parents or teachers we would provide educational interpretations of what the children were learning as evidenced in the work itself."

Children learn to become competent when they paint. They learn skills that expand their power, and with that power they can say more both to themselves and to the world. The British philosopher R. G. Collingwood pointed out that expression is a process through which ideas are formed and clarified.<sup>10</sup> The writer in a sense does not know what he has to say until it is said. The process of forming ideas is also a process of clarifying one's thoughts. To what extent does the process of expressing feeling through the creation of visual images clarify the feelings that children have? To what extent do children learn from the images they make how they feel about aspects of the world or their own experience? Paintings, drawings, sculptures are, after all, public vehicles that provide feedback to the child. In a sense, paintings project back to the child the child's ideas. Yet there is, of course, an important interaction between the child's ideas and his skills. Ideas can be well in advance of the skills the child is able to use. When this occurs, frustration is likely. The child has something to express but does not have the means to express it in material form. Conversely, skills may be well developed, but the child (or adult artist) may have little or nothing to express. The point here is that children with sensitive interaction

between content and technique. The former without the latter leads nowhere, and the latter without the former is empty. Ideally the relationship is symbiotic.

A seventh thing that children learn from making images is that ideas and emotions that are not physically present can be symbolized by the images one can create. When children first engage in the making of images, the character of such images is wholly abstract. What they respond to is the joy of using their senses, the movement of the hands, wrists, and arms, and the emerging patterns that appear on paper. By the time children reach four years of age, the shift to symbolic forms of representation has occurred, and of course the symbols that are drawn are symbols of physical objects which although imbued with feeling, nevertheless are related to concrete forms; people, trees, houses, and the like. It is only later in the course of human development and learning that the child learns that images can be made that are non-representational and which can convey or stand for certain ideas or feelings that are literally non-empirical. The realization that ideas like "power" or "humor" or "crispness" can be represented in non-objective ways is a late development in children's art. Young children do not use abstract ideas as subject matter for their efforts. What they draw or paint is concrete, and by nine or ten they are interested in the persuasive rendering of concrete forms. Such rendering becomes for them an artistic virtue.

But as they get older, as they move into formal operations, they have the capacity to grasp the idea that ideas, even those that are temporal and abstract, can be transformed into a visual, non-objective analogue. The paradigm case of such art among mature artists is found in the work of Rothko, Kline, Pollack, and Barnett Newman and the like.

The achievement of such a realization is not, I think, common among children at either the elementary or secondary levels. Unfortunately the data that are available for elementary school children indicate that subject matter rather than style is the major focus to which children attend when looking at paintings." Yet children and certainly adolescents can be helped to learn to see the strictly visual qualities of form and can come to realize the ways in which nonobjective images can stand for qualities of experience that are not embodied in a concrete object.

One of the most sophisticated aspects of what children can learn when making visual images, is the fact that there are ideas, images, and feelings that can only be expressed through visual form. This is the eighth thing that children learn. What we have in this form of learning is the implicit, if not always explicit recognition of the epistemological contributions of art. The forms one uses to conceptualize and express are not neutral with respect to the content that one can know and un-

derstand. How one expresses what one knows, as well as the medium one chooses to use, influences profoundly the content of expression. Put more simply, eventually children and adolescents learn that the visual arts, or music, or poetry are not inferior substitutes for scientific and propositional knowledge. The expressive content of the visual arts cannot be duplicated in music: the expressive content of music cannot be duplicated in poetry; and poetry is no substitute for science. There is a significant relationship between the mode of conceptualization one employs, the forms of disclosure one chooses to use, and the character of understanding and experience one secures. It is one thing to conceptualize in an auditory mode, another in a visual mode, and still another in a discursive mode. Visual modes are more spatial than temporal, while auditory and discursive modes are temporal. The nature of these modes defines the parameters of conceptual possibility. For example, consider how easy it is to conceptualize and express suspense in music and how difficult it is in visual art. Suspense is a temporal phenomenon, visual art is not.<sup>12</sup>

The fact that the medium affects the message is an invitation to people to reflect upon the nature of non-discursive forms of understanding; indeed, experience in the arts provides the material needed for such reflection. One who has not experienced the unique contributions of the arts to human understanding is in no position to understand the variety of ways in which humans come to know. In this sense work in the arts provides a basis for philosophic inquiry into questions of what knowledge is, how it is secured, and how the utilities of its several species can be compared and contrasted. Such forms of learning are, of course, a far cry from the very young child's realization that he or she has the ability to bring images into existence, yet the whole range of what can be learned from making images should be explored and not only those germane to preschoolers.

- Finally (for the purposes of this paper), the ninth thing that children learn when they paint is that the world itself can be regarded as a source of aesthetic experience and as a pool of expressive form.

This aspect of learning in art represents the development of a special relationship to the world, the cultivation of what might be called an aesthetic attitude. To create images that have expressive power and aesthetic quality one must forego exclusive attention to an object's literal meaning or to its instrumental use. One must attend to the form of the thing in order to perceive and explore the relationships among the qualities it presents. But perhaps even more, one must perceive the expressive character of the forms, not just their formal relationships, but what they convey in feeling. The abil-

ity to do this is to some degree natural. As Arnheim put it, "Expression is the primary content of vision."<sup>13</sup> Yet through acculturation the child's ability to perceive such qualities is diminished. As he gets older, discursive language takes over, and the instrumental use of forms supersedes their exploratory use.

Insofar as work in the visual arts fosters attention to qualities per se, it has the potential to develop what is absolutely critical for using the world as a source of aesthetic experience. That absolute necessity is the inclination and ability to relate to the world with an aesthetic attitude, a type of disinterested but not uninterested perception. Unless the individual can forsake the strictly literal or strictly utilitarian, the formal and expressive characteristics of objects, events, and situations remain unseen and unexperienced. What differentiates the aesthetically well developed individual from his or her opposite is that such an attitude has developed, first in relation to specific forms: ceramics, orchids, ten-speed bicycles, sculpture, and later as a generalized conceptual set towards a wide variety of forms. Eventually, the scope includes the world itself. Life becomes "an object" to be regarded with an aesthetic attitude. To say this is not to imply that individuals must constantly regard life as they would a Matisse. It is to say that the use of an aesthetic attitude toward a wide variety of forms in the world becomes an option that a person can employ when he or she so chooses.

Thus in one sense what children eventually learn when they paint is a way of looking at life-is a particular stance, a kind of perspective that frees them from the unrelenting demands of practicality. They learn how to savor the quality of experience that flows from the qualities they encounter. Such experience, in turn, become the sources for artistic expression. Work in the arts, in sum, provides children with the opportunity to develop the sensibilities that make aesthetic awareness of the world possible. And such awareness provides the content not only for aesthetic experience, but for art itself.

I would like to conclude by asking what all of this has to do with the relationship between what is natural and what is cultural in human development. Simply this. Some aspects of artistic thinking are inherent in the human condition, such as the need to confer form upon ideas and feelings in order to have them. The need to explore and be stimulated by images of our own making. The need to use our senses so that they actualize rather than atrophy. No culture has been found that does not use language or create images.

But what is not natural is the refinement of the images we make beyond the necessities of survival. What is not natural is the cultivation of the sensibilities beyond what is needed to get on in the world. What is not natural is the extension of the repertoire of skills that

can be used to form conception and to articulate expression. For these forms of learning to occur, tuition is necessary. Teachers of art have a necessary role to play in bringing culture to nature. An unassisted course of maturation simply will not develop the potential that children possess. This assistance is what we call teaching, and to provide it I can think of no group of people more competent than those who are devoting their professional lives to its behalf. The people to whom I am referring are those we call teachers of art.

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#### REFERENCES

<sup>1</sup> This paper was originally prepared for presentation at the Canadian Society for Education Through Art, Calgary, Alberta, Canada, October 1977.

<sup>2</sup> Richard de Charms, *Personal Causation: The International Affective Determinants of Behavior*, New York: Academic Press, 1968.

<sup>3</sup> Mark Lepper and David Greene, "Turning Play into Work: Effects of Adult Surveillance and Extrinsic Rewards on Children's Intrinsic Motivation," *Journal of Personality and Social Psychology*, Vol. 31, No. 3, pp. 479-486, 1975.

<sup>4</sup> Susanne Langer, "Intuition and Transformation in the Arts," *Problems of Art*, New York: Charles Scribners Sons, 1957, pp. 90-107.

<sup>5</sup> Rudolf Arnheim, "Growth," *Art and Visual Perception*, Berkeley: University of California Press, 1954.

<sup>6</sup> Susanne Langer, *Philosophy in a New Key*, New York: The New American Library, 1951, pp. 99.

<sup>7</sup> This is not to imply that children between two and five make a distinction between what is imaginative and what is "real". However, children beyond five generally do make such distinctions and will practice through play what they cannot do in actuality.

<sup>8</sup> John Dewey, *Art as Experience*, New York: Minton, Balch & Co., 1934.

<sup>9</sup> For an elaboration of this use of evaluation in art see Elliot W. Eisner, "Toward a More Adequate Conception of Evaluation in the Arts," *Art Education*, Vol. 27, No. 2, February, 1974.

<sup>10</sup> R. G. Collingwood, *Principles of Art*, London: Clarendon Press, 1938.

<sup>11</sup> See Howard Gardner and Judith Gardner, "Developmental Trends in Sensitivity to Form and Subject Matter in Paintings," *Studies in Art Education*, Vol. 14, No. 2, pp. 52-56, 1973.

<sup>12</sup> This observation was made by Rudolf Arnheim in a lecture at Stanford University's Art Education Lecture series in 1976.

<sup>13</sup> Rudolf Arnheim, "Expression," *Art and Visual Perception*, Berkeley: University of California Press, 1954.