

KEYNOTE ADDRESS

ART IN MIND: AN AGENDA FOR RESEARCH

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I

Preliminary Comments

To establish an approach for understanding the relationships between cognition, culture, and education, I begin with the premise that the mind is not a noun, something complete at its conception or its birth. It is, rather, a process whose growth is influenced by the ways in which the mind is used. The ways in which it is used are influenced by the culture in which an individual lives.

The term “culture” has two meanings. In the anthropological sense, a culture is a shared way of life. In the biological sense, a culture is a medium for growing things. Schools are cultures in both senses of the term. Schools provide the conditions for a shared way of life, and they are also cultures for growing things. What they grow, at least what they aspire to grow, are minds.

Schools grow minds through the major practices they provide. They provide a designed environment that includes, but is not exhausted by, the curriculum. They also mediate that designed environment through a process called teaching.

The long-term aim of the designed environment of school is to help children learn how to invent themselves throughout the course of their lives and to become the architects of their own education. Given this aim, what schools make it possible for

students to learn and the dispositions they cultivate are two of its most critical features. The curriculum defines the content—ideas, values, and skills—that becomes a significant part of the child’s cognitive repertoire. Teaching promotes the dispositions to use that repertoire when a child chooses to do so.

II

In the competition for time and attention, the arts have not fared well in our schools. We have been, and are especially today, influenced by a concept that regards the arts as largely mindless. The arts are believed to have more to do with sensation and emotion than with intellectual rigor or with the forms of abstract thought that are used in science and math. Those of us in education live under a theoretical cloud first released by Plato, reinforced at the dawn of the Enlightenment by Rene Descartes, and given force in the 19th century by Auguste Comte. This cloud separates mind from body, thought from emotion, head from hand, feeling from thinking, and idea from image. The arts traffic in images, and images are lower on the intellectual scale than what the Greeks called logos, their term for word or language. It is a word or a language that makes knowledge possible, because it is language that makes reason possible. At least this is how the story goes.

Most likely, educational policy makers do not consult Plato, Descartes, or Comte before they decide which subjects to privilege. Nevertheless, a person does not have to be aware of the sources that influence him to be influenced by those sources. We regard the arts as nice, but not as necessary. They are closer to the margins of education than to its core. They are more ornamental than useful. The idea of felt thought seems like an

oxymoron to many. It is this cultural context that sets the stage for our research and provides the reasons for its importance.

III

My task is to describe the contours of a research agenda that will help us understand how the mind is engaged in the arts. Mapping the processes that the arts evoke needs attention. For example, we need to understand how those who work in the arts make choices. This kind of research is a descriptive activity that demands insight and imagination. Concept formation is an imaginative achievement, and how we plot and describe the contours of mind, especially mind in motion, matters.

It is not enough that descriptive research matters for those of us in education. We work in a normative field. We are concerned with promoting growth, and so what we need to know is what contributes to the growth of mind in and through the arts.

What follows are nine assertions about the kind of thinking employed in the arts. Most of the examples come from the visual arts. Each of the forms of thought described warrants empirical study. Each could become the beginning of a research program. The following assertions consider what kind of thinking and what kind of learning that work in the arts promotes.

1. The arts help us learn how to attend to qualitative relationships and how to create coherent relationships in the absence of rule.

One of the fundamental activities that engage those working in any art form is the creation of expressive and satisfying relationships. The composer in the context of music arranges auditory forms that eventually culminate in what might be a sonata, a symphony, an oratorio, and the like. The

composer's task is to generate and select qualities that express in satisfying ways what sound is capable of expressing.

Visual artists face a similar task. Each stroke of the brush alters relationships, and the task the artist must address is to create relationships among visual qualities that express what the artist intends or what he or she discovers in the course of action.

One of the significant features of the decision making necessary for creating those relationships is that they are not determined by rule; there is no algorithm that can determine what is aesthetically right. Judgments are made on the basis of somatic knowledge, an awareness in the body of the fit of relationships among sound (if the form is music) or vision (if the form is art). Working in the arts is a way to cultivate the sensibilities and to refine the forms of somatic response that make decisions appropriate in the particular art form with which an individual works.

2. The arts help one learn to be flexibly purposive in order to exploit the unanticipated opportunities that emerge during the course of one's work.

One of the features of Western rationality is the assumption that goals must always precede means. This is because the appropriateness of means need to be determined by their efficacy in achieving predetermined goals. The means-ends model of planning dominates our view of what rational, strategic thought entails.

While this model certainly has enormous utility, it does not exhaust the ways in which goals are formed. Goals, particularly in complex situations, often follow the application of means rather than precede them. During the course of one's work, say in painting, qualities emerge that were not anticipated. These qualities are then pursued by the artist; they are exploited. They constitute a source of surprise and become a source of delight. Indeed, without surprise, work can easily become a routine. It is in the creation of surprise, a willingness to lose control and not only to secure control, that growth is fostered.

John Dewey referred to this process as "flexible purposing." The emphasis here is on flexible. Rigidity is the enemy of art—so is the chaotic. Flexible purposing is a process that exploits the unexpected in constructive ways. It is a process that fine teaching in the arts promotes.

3. The arts help us learn how to think within the constraints and affordances of a medium.

Whether it be words, visual qualities, choreographed movement or sound, each material selected for work imposes particular constraints and provides particular affordances. Some things can be done with wire that cannot be done with wood. Things can be done with sound that cannot be done with bronze. Each material mediates the artist's intentions and actions. For such mediation to serve the ends of art, the individual must develop a feel for the material he or she uses. It is this feel and the ability to think within its

constraints and affordances through which the material becomes converted from material to medium. The distinction is an important one. A medium mediates. A material achieves the status of a medium when an individual is able to treat the material through the application of technique and imagination that makes possible the work of art. Work in the arts helps students learn to think within the possibilities of the material with which they choose to work.

4. The arts help us learn to rely upon the imagination in order to take multiple perspectives or to see things in a variety of unconventional ways.

Perhaps nowhere is the imagination more important than in work in the arts. To be sure, imaginative processes are critical in science, but there is a form of liberty in the arts that makes it possible for individuals to create images that never existed and to use those never existing images to serve artistic purposes. The unicorn, Pinocchio's growing nose, and the melting clocks of Salvador Dali's surrealist images are exemplifications of the exercise of imagination in the service of artistic ends. The arts provide permission for and invite the use of imaginative processes. In a school system that is often right-angled and hyper-rationalized, the ability to fly high through the wings of the imagination is an important antidote to the current press for prediction and control in student performance and in teaching.

5. The arts help us learn to pay attention to nuance, to see and not merely to recognize.

The arts put a premium on nuance; subtlety counts whether auditory or visual, whether poetic or literary. To work well in the arts requires attention to nuance. Students working with the qualities of a material learn to experience that material neither as referent for a label nor as a mere utility, but as a quality to be savored, or as a delectable source of experience. Seeing, in these terms, is an achievement, not merely a task. To see is to realize and to have created through an active form of thinking a certain quality of life, a quality of life engendered by attention to the qualities to which one attends. Work in the arts promotes the development of such attention, and through it refines the student's ability to differentiate and to notice what had not been noticed before.

6. The arts help us learn to surrender to the demands of the work in process and to follow its lead.

Western culture puts a premium on the mastery of nature, on getting on top of things, on beating the opponent, and on doing things with efficiency. The arts provide another vision. Work in the arts requires an ability to surrender to the leads that it makes possible, to court the unknown, to work at the edge of incompetence, and to find oneself in the process. Paradoxically, the arts enable one to lose oneself in order to find oneself. This requires a willingness to relinquish control and to surrender to a kind of qualitative envelopment, or an immersion in the qualities of the work. To say that there is no frigate like a book, is to convey the notion that a work of art can take us

to places we cannot reach through any other means. Of course, to make that happen, we must relinquish control, if only temporarily.

7. The arts help us learn to use language figuratively, even poetically, in order to describe the ineffable qualities of expressive qualitative form.

Providing opportunities to talk about works of art also provides opportunities for students to seek and use words—metaphors, similes, tropes of various kinds—to describe qualities that are fundamentally ineffable. A thing, after all, is a thing and not another thing. The ability to talk about works of art or to write about them is what critics of art do. In so doing, they learn to use language in sensitive and in generative ways. They attempt to render a work through words rather than to describe it in literal terms. The opportunity to use language in this way promotes its poetic and figurative use. In schools burdened with literalism, opportunities for a student to talk about the arts is one of the ways of promoting his ability to use language and his ability to discover the visual qualities his language is intended to reveal.

8. The arts help us learn how to create forms that express emotionally what cannot be conveyed in literal language.

Meaning is not restricted to the sayable. The American philosopher Michael Polanyi once commented, “We know more than we can tell.” We go to the arts to express what cannot be articulated in number or given form in literal language. At funerals and at weddings, at the most poignant episodes

that punctuate our lives, we often appeal to the arts to convey feelings that are in no other way as expressible. In so doing, we evoke meanings that are rooted in the arts themselves that have been crafted by the forms of intelligence that the arts require. For a student, the ability to use the arts as a source of meaning is a way of expanding his consciousness and giving him access to a world that would otherwise be closed to him. When arts teachers work with students well, the students' abilities to secure artistically grounded meaning is enhanced.

9. The arts help us learn to experience the qualitative features of both the arts themselves and the world "outside" of them.

The kind of learning that is promoted in effective arts education is by no means limited to the development of the student's ability to see the qualities of art works. On the contrary, programs that had effects limited to such outcomes would be educationally problematic. The task in art education is not only to promote the student's ability to see the qualities that constitute works of art, but also to help him see the world outside of the arts differently. The difference is the ability to see qualities of the environment that become works of art when they are approached from an aesthetic frame of reference.

Of course, trees, garbage cans, rocks, and city streets are not works of art in the sense in which Beethoven's Ninth Symphony is a work of art, but such phenomena can be experienced aesthetically if students can apply an appropriate frame of reference in addressing those phenomena. Arts

education, when it is truly effective, promotes the ability to use such a frame and through it to enrich one's experience.

The following are important questions pertaining to each of the above assertions: Does such learning transfer? Is learning in the arts limited to the arts? Or does it influence performance in other domains as well? The jury is still out on these questions. To study these areas will require both reconceptualizing the meaning of transfer and developing experimental studies that are true experiments. At the moment, we have correlational studies in which conclusions are confounded by the use of non-randomized volunteer groups and intact classes. There is virtually no attention being paid to the features of the experimental treatment, namely the arts classes that are supposed to have caused the effects claimed. Such studies cannot be used to make causal claims.

Another way to map the type of research we need is to say that we need studies that address arts-based outcomes: Outcomes that are within the domain of the arts as such. We also need studies that address arts-related outcomes: Studies that establish a link, if there is one, between work in the arts and the visual culture. And we need studies that focus on extra artistic outcomes: Studies that look for transfer effects from work in the arts on performance in math and science, for example.

The data sources for such research can come from the analysis of artwork, from think-aloud protocols, from neuro-physiological monitoring, and from discourse analysis. What do students say when describing and discussing the arts? Has their language changed and does the change in language reflect a change in what they see? The data sources are multiple, and each will provide insights of different kinds.

But decontextualized analysis is limited in usefulness. We also need to understand the context in which thinking in the arts is promoted; it is not enough to have good measures of dependent variables if there is no information that relates those measured outcomes to sources of influence. To know something about sources of influence, we will need to pay attention to the context in which learning occurred. This context includes the features of the art tasks students were asked to address. What kinds of demands are those tasks likely to make? How are they structured? What kind of thinking is required to deal with them?

In addition, we need to know about teaching practices. What kind of prompts did the teacher provide? What kind of teaching was provided by the peer community in the class?

Attention to the curriculum is also needed. How was the curriculum organized? To what extent, if at all, were the activities sequenced with respect to skill development? Who defined the tasks constituting the curriculum? Finally, to understand the context, we need to know about the classroom milieu. What are its norms? Does the classroom provide opportunities for the students to move about, to consult with peers, and to get their feedback?

These are some of the context conditions that need to be studied in order to understand what influences learning in the arts. Without such understanding, it will be difficult to understand why or why not arts learning has effects in other domains.

While I am focusing on the features and promotions of thinking in the arts, there is no reason to assume that the cognitive features I describe are limited to the arts alone. To the extent to which the practice of science is an art, it, too, can be studied with respect

to the artistic modes of thought its practitioners employ. My research on what social scientists experience when they do research tells me it has some of the same features. Clearly, science is not an art in the way the fine arts are art, but the conduct of science can be an artistically rendered and aesthetically satisfying practice. I believe that any field of practice can profit when it is practiced artfully. I also believe that engagement in any field is likely to be sweeter for our students if it they experience it aesthetically. Indeed, it might even be said that the educational process is at its very best when it approximates an art form.

So let me end by expressing the hope that our research will make a contribution not only to promoting, thinking, and learning in the arts, but also to the role of such thinking in all that we teach.