12 Museum Theorists at PLAY

Reflections on Theory and Practice in Museum Education

Edited by: Jeffrey Hall, Lauren Appel, Kat Harris, Nicole Keller, & David Vining

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Thank you to my wonderful students who spent so much of their precious time meeting, reading their chapters to each other, and helping (Vygotsky style) clarify their writing. And a special thanks to our marvelous editors Jeffrey Hall, David Vining, Lauren Appel, Kat Harris, Nicole Keller, and Elizabeth Segal for their work and caring. And another special thanks to Jeffrey Hall for his know-how and time and patience with my caveman knowledge of technology. And thanks to our librarian, Peter Hare, who knows the inside skin of references. And thanks to Nina Jensen for her efforts for promoting this publication. I am grateful to you all.

Marian Howard

FOREWORD

Bank Street College believes that excellence in education is based on a deep understanding of how children develop intellectually, physically, socially, and emotionally. Museum educators need the same grounding in what Bank Street calls the "developmental - interactive approach." We have a strong commitment to integrating theory and practice - basing what we do on what we believe. This book gives examples of how 12 progressive theories about learning enrich and inform educational practice when they are applied in museums.

All proceeds from this book go to the scholarship fund for Museum Education students at Bank Street College of Education.

Marian Howard

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INTRODUCTION

BY LAUREN APPEL

On a tour of a gallery of 15th-century Tibetan art, a high school student in a class of English language learners I had been working with during an eight-week residency turned to me with radiant eyes and, struggling to put the words together in English, said, “When I look at this art I feel the way you do when you first fall in love.” Her declaration gave me goose bumps and reminded me why I love being an educator. Although we had looked at, discussed, and created art together in her classroom, in this moment in the gallery, in the middle of an hour-long tour, she had a memorable and transformative experience.

As museum educators, we have the profound privilege and great challenge of working with a range of audiences—visitors of many ages, with widely diverging reasons and goals for coming to our institutions. In what is often a too-brief visit, we have the unique opportunity to share the resources of our museums, hopefully piquing a visitor’s interest enough to lead them to engage in further investigation on their own or to return to our institutions in the future.

In the field of museum education, we come from a range of training, backgrounds, and experiences. While no single model of education fits all communities and contexts, there is value in museum educators having a shared grounding in educational theory to strengthen our work with the diverse audiences we serve. This book aims to provide that shared foundation of educational theory combined with contextualized examples of work relevant to key theorists in the field of museum education, spanning numerous settings and perspectives from generations of educators and students.

The theoretical essays in this book explore themes central to the work of museum educators as we strive to make visitors’ experiences positive, educative, and memorable. These themes include the role of questions, silence, language, and dialogue in a visitor’s museum experience; the role of social learning and sensory experiences; the significance of incorporating a visitor’s personal experiences, connections, and prior knowledge into their visit; and the tenuous relationship between presenting information and facilitating opportunities for open discourse and discovery among visitors. Exploring these themes in a variety of mu-

seum settings, each chapter provides insight into how visitors engage in meaning-making in museums, and how museum educators mediate those experiences.

This book is organized into three sections focusing on, respectively, the history of progressive education, learning in museums, and how contemporary theorists inform the unique aspects of educating and learning in the 21st century. The theorists in this book include John Dewey, Jean Piaget, Lev Vygotsky, Mihaly Csikszentmihalyi, Howard Gardner, David Carr, George Hein, Maxine Greene, John Cotton Dana, Benjamin Ives Gilman, David Sobel, and Paulo Freire. While the lives of these theorists span three centuries, the practical applications of their theories remain relevant. Likewise, the range of institutions represented in this book, from small and specialized art museums to zoos, botanical gardens, and historical societies, demonstrates how the work of the theorists applies to a variety of educational institutions. The collection of essays in this book demonstrates how the ideas of the theorists intersect, overlap, and diverge. Similarly, while the contributors share their experience as students or graduates of the Museum Education Program at Bank Street College of Education, we otherwise represent a wide range of interests and experience in the field. Just as we have come together as writers under the direction of Dr. Marian Howard from Bank Street, the ideas of these theorists mingle in many museums, continually informing and influencing our practice.

Bank Street College was founded in 1916 by Lucy Sprague Mitchell. Its developmental interaction approach is rooted in educational psychology and progressive, experiential education. It reminds us that in order to be great educators we must understand how people learn and develop, be aware of the interconnectedness of thought and emotion, and consider “the importance of engagement with the environment of children, adults, and the material world” (Shapiro & Nager, 2000, p. 11). As a basis for creating a positive and constructive learning environment, Bank Street pushes students to consider how people learn and engage with the material world.

It is with this perspective that we came together to write this book. Taken as a whole, it addresses some of the most salient ways museum educators provide experiences that afford opportunities to explore history, culture, science, identity,

and community, while nurturing visitors' desires to make meaning of their experiences.

References

Shapiro, E. K. & Nager, N. (2000). The developmental-interaction approach to education: Retrospect and prospect. In N. Nager & E. K. Shapiro (Eds.), Revisiting a progressive pedagogy: The developmental-interaction approach (pp. 11–46). Albany, NY: State University of New York Press.

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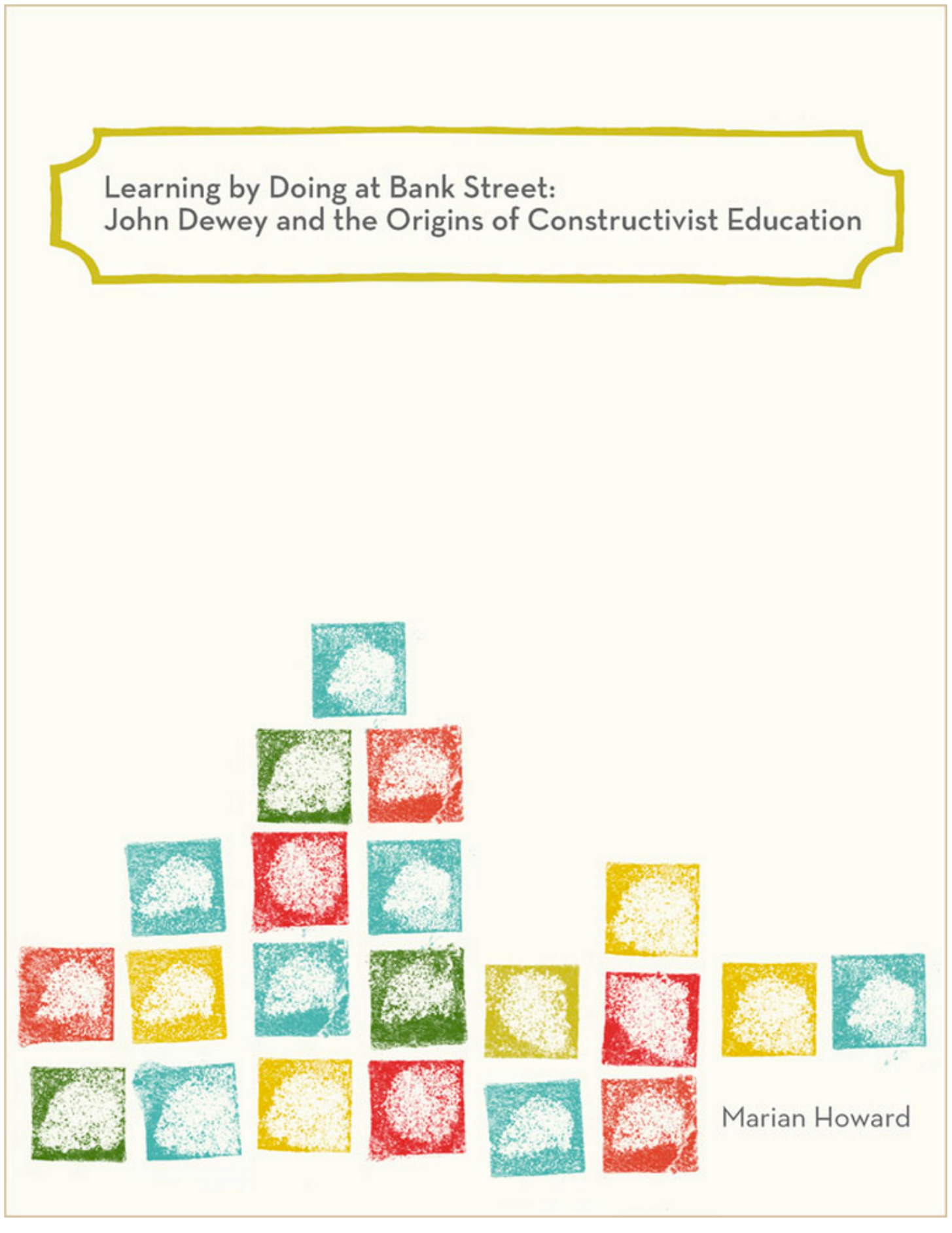
LEARNING BY DO-WEYEN

BY MARIAN HOWARD WITH NICOLE FERRIN



A graduate student of mine, having spent a month student-teaching in a second-grade classroom, dropped her backpack full of books on the table at our 10 a.m. class on learning theorists, sank into a chair, and said, “Do, Do, Do! Enough already of ‘learning by doing!’”

“Why?” I asked, in my best Deweyan teaching style. At Bank Street College of Education, where I teach graduate students, creating learning experiences and asking questions to elicit students’ personal inquiry is an important part of our methods of engagement.

“That’s why!” she said. “Every question leads to another question! Like the infinite number of turtles holding up the earth.”

“I know what you mean,” I said, “that ‘doing’ simplifies a complex and really difficult way to teach.”

“It’s challenging to be doing all that doing,” she replied.

Well, she had a point. Being a progressive educator in the Dewey model can be taxing on the teacher in ways difficult to express. The phrase “learning by doing” has become a simplification that we educators use as a quick way to capture Dewey’s philosophy. “Doing” starts to sound like a slogan, a snappy phrase right out of Mad Men, Madison Avenue selling a product. Dewey (1916) talked about activity—to act, to do, to be involved:

> To “learn from experience” is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying, an experiment with the world to find out what it is like, and the undergoing becomes instruction—discovery of the connection of things. (p. 140)

As I was driving home that evening, the thought of my student’s frustration, her struggle through the foggy, foggy “Dew,” raised some old discomfort. Besides the slogan aspect of the phrase, it leaves out the emphasis on thinking which, for Dewey, is an equal part of the process. Learning by doing and then pondering is closer to Dewey’s belief than incessant questioning alone. And the ponder-

ing—the struggle for meaning-making, the effort to integrate experience and knowledge—is difficult work. I had to wonder with my student, is it worth it?

With years of teaching experience, I would answer with a resounding “yes.” I still marvel at Dewey’s critical contributions to the field of education. I remember what joy the Deweyan method brought to my developing teaching practice. Learning by doing— or more accurately, learning from experience—has opened up a different way of thinking about education.

John Dewey, 1859–1952

Just for a little background: John Dewey was born over 160 years ago, on October 20, 1859, in what was then the rural farm town of Burlington, Vermont. He stayed close to home for college, attending the University of Vermont, but moved on to Johns Hopkins to get his PhD in philosophy. Dewey became a serious student of Hegel, and my students consider him to be the father of functional psychology and pragmatism. His teaching career was extensive; he taught at the University of Michigan, the University of Chicago, and at Columbia University in New York City. He was interested in academic freedom in universities and was a member of the first teacher’s union in New York City. He became the founder of the American Association of University Professors. He married twice and had six children. And somehow, during those busy years, he wrote over 700 articles in 140 journals (or so I am told), and I counted 40 books of his—maybe there are even more.

Although Dewey’s focus on education was a unique element of his philosophical thinking and writing, he clearly stated his concern for the role of democracy in schools and in the political arena—including women’s suffrage and world peace. Dewey was a trustee of Hull House, the settlement house started by Jane Adams, and “viewed Hull-House as a model for what schools should become” (Bryan & Davis, 1990, p. 104). He also wrote about the human connection to nature and art. He died at age 93 in New York City, a world-renowned American educator, philosopher, psychologist, social critic, and political activist.

What do we mean by learning from experience?

The teacher's job in a Deweyan classroom in a school or a museum is not to stand up at a podium and tell students what they should know and how to think. Dewey advocated a departure from what he called "traditional education": the expectation for teachers to lecture and for students to memorize "hard facts." In Dewey's progressive classroom, the teacher's job is to set up "experiences that educate." As my colleague, the Dewey scholar Harriet Cuffaro (personal communication, April 15, 1982), clarified:

> All a teacher can do is offer the opportunity to experience, which means we must think about the learner's interests. Learning is an ever- shifting process that involves a subtle form of leadership and needs time, space, and setting. Experiences are had, not given.
>
> The teacher offers the opportunity for an educative experience, and the students take the initiative to make meaning as fully engaged participants in their own education.

Museums are ideally suited for participatory experiences. For example, at the Morgan Library & Museum, children are encouraged to illustrate a parchment page with gold leaf as a way of understanding what they have just seen in a medieval manuscripts exhibition. At the New York Public Library, as part of a visit to a manuscript exhibition called Three Religions, students practiced writing in different fonts, made inks, and used papers made from different materials to fully appreciate the difficulty and beauty of making an illuminated text by hand. Back in the classroom, one teacher said her students had a lively discussion about who decided what was to be written in medieval times. She planned to connect their experience at the museum to the lives of monks in monasteries. Their next trip was to the Cloisters to better understand the context of the lives of monks.

Learning by doing is not, however, limited to social studies and the arts. Many of my graduate students teach and student-teach in classrooms where children spend their days learning by discovering solutions. In one math lesson, I observed fourth-grade students deep in debate with one another, gathered in groups of three around desks covered in colored connecting cubes. Determined

to decide definitively how many factors the number 120 had, students separated and rearranged cubes into different models as their teacher kept an eye on their progress. Only when the children paused, stumped, did the teacher pose a small yet thoughtful question that built on knowledge they had previously acquired: "How are you keeping track of the factors you've found? What do you know about numbers that are multiples of 10?" Through this teacher's deliberate questions, the students ultimately discovered their answers—not merely numbers on a page, but numbers with an experiential reference.

These are decidedly not passive lessons. Experiences that educate through discovery are ones where the students enter a process of "continual reorganization, reconstruction and transformation" (Dewey, 1916 p. 50). This scientific mode of inquiry starts from what students know or do (which can be as simple as the joy of books). They explore what happens in consequence (how books were made before printing presses). These connections help students see the relationship between events. Dewey's philosophy provided a way to close the gap between scientific knowledge and pragmatic experiences. Dewey argued that educators must first understand the importance of human experience, allowing students to bring their own lives and understandings into the classroom as a starting point.

Dewey is well known for his support of "inquiry," which progressive educators use to mean focusing on questioning, experimentation, and learning from the past as key components of education. Students "construct" their own understanding. One's present experience is a fusion—the interaction of one's past experiences with one's present situation. Therefore, a student's experience of a lesson will depend on how the teacher arranges and facilitates the lesson as well as on the student's individual past experiences of similar lessons and previous teachers and on the student's lived life. Dewey (1934/2005) put it this way:

> Between the poles of aimlessness and mechanical efficiency, there lie those courses of action in which through successive deeds there runs a sense of growing meaning conserved and accumulating towards an end that is felt as accomplishment of a process. (p. 40)

Dewey frequently used the terms "continuity" and "interaction," referring to leaning as a continuous process, not a fragmented one.

…and then pondering

Reflection that follows the doing is what makes an experience educational. For example, a student in the third grade at the Fieldston School wanted to know how the North American Native Americans in the 18th century preserved food all winter in a cold northern climate. During a class meeting, the kids were asked to ponder solutions to this question from their own lived lives. Ari offered, “They put the venison in the snow.” Bill said, “But what if the snow melts?” Juan suggested, “Maybe they put it in the frozen river.” Here’s where the teacher suggested some research, going on line or to the library to gather relevant data. The next day, at snack time, dried raisins, fruit, and beef jerky appeared in the classroom. One kid yelled, “I got an idea!” The teacher asked him, “Marley, have you thought of another process besides keeping something cold that might preserve it?”

Hypotheses are formed and experiments set up, and not only in the realm of science. According to the Deweyan model, hypothesizing and experimenting have, as we have seen, a place across the curriculum. Students can gain valuable insights into the way people lived, connecting their own experiences and applying them to the human condition. From my point of view, the kids will remember this information more deeply than if the teacher had given them “straight facts” instead of providing the students guided opportunities to figure it out for themselves.

I went to a Dewey school, studied 18th-century American Indian culture in third grade, and never forgot the experience. A seed was planted, perhaps germinating into my becoming an anthropologist. Learning happens when kids (in fact, people of all ages) grapple with a problem and find solutions that come out of pondering and experimenting.

Education starts with lived life…

Dewey (1938/1997) stated that “a primary responsibility of educators is that… they should know how to utilize the surroundings…that exist so as to extract from them all that they have to contribute to building up experiences that are worth while” (p. 40). A teacher has to know the surroundings of the school. Educators are responsible for providing students with experiences that are immediately valuable and that also encourage good habits, growth, and positive interaction. One

of Dewey's criticisms of traditional education was that it lacked a holistic understanding of students. For Dewey, traditional curricula were overly focused on separate areas of content, rather than on both content and process.

…and moves outward: Education for democracy

Emphasizing the subjective quality of a student's experience, Dewey stressed the necessity for the teacher to effectively design a sequence of liberating educational experiences that will allow students to fulfill their potential as members of society. According to Dewey, education should have a societal purpose as well as an individual one. Dewey stressed that classrooms (in both schools and museums) in which the teacher is a facilitator—a guide on the journey—is more likely to educate students to be members of a democratic society.

What resonates fiercely with my graduate students in museum education is Dewey's emphasis on a moral commitment. His philosophy and practice were developed to shape an ethical and social purpose within his students. A participatory classroom heralds a Socratic, participatory democracy. A Deweyan class often begins with a meeting that fosters the social: for example, students devising their own rules that create a sense of responsibility. Communication is emphasized—students sharing their visions. Time is spent in discussions: disagreeing, questioning, listening, and reviewing. What's progressive about the education that Dewey advocated is that it is appropriate education for a society that is making progress toward a democratic ideal. To achieve such a society, we need questioning and problem-solving citizens with developed minds that have been educated to inquire and question, experiment, and try new solutions.

Dewey and museum education

Dewey consistently described the empowered school as an institution that includes libraries and museums. Such places could naturally function together to allow students to unify life experiences and museum visits. Museums in particular are assigned a central role as integrative components of raw experiences for students. Believing that ideas are not complete until they are applied and tested in actual life situations, Dewey found museums to be excellent grounds for facilitat-

ing this growth. Together with libraries, museums function as intellectual centers for developing the work that occurs in separate facets of life. While Dewey (1900/1990) was careful to note that by itself, the museum experience (of his day) could actually be “harmful as a substitute for experience,” he believed nonetheless that, correctly used, a museum is “all-important in interpreting and expanding experience” (p. 85).

I should mention here that museums have changed a great deal since Dewey’s day—mostly in a direction, I believe, that would have delighted Dewey. Education is much more central, and exhibitions are more participatory than they were years ago. In fact, museums offer some of the most progressive practices in education today, as they are places free from high-stakes testing.

Most desirable to Dewey were museums that are associated with life activities outside their walls. He aspired to make museums places for personal discovery, believing that his advocacy of a philosophy of learning from experience could receive direct application within a museum setting.

I recently observed a third-grade class of mostly eight-year-olds at an aquarium. Grappling with the question of how fish breathe in water, Hayley said, “We know all living things—even plants—need oxygen.” Jake offered, “Water’s H2O. There is oxygen in water but how do they get it into their body?”

Cynthia suggested, “Maybe when they gulp their food.” Nikhil said, “I think it has to do with their gills. When I went fishing with my dad the fish kept gasping, moving its gills on the dock.”

Nikhil’s thoughts, supported by his real-life observation, demonstrated his ability to integrate new information with previously found understandings. The teacher could now use the ideas and knowledge of some of the students and help others learn about the fascinating world under the sea.

Dewey believed that art (defined broadly) has a special place in the realm of experience, as the title of his book Art as Experience suggests. An experience with art is one in which the viewer is deeply intellectually and emotionally engaged with special intensity. Dewey (1934/2005) says, “To be truly artistic, a work must also be esthetic—that is, framed for enjoyed receptive perception” (p. 49). This observation is helpful for us as educators trying to understand Dewey’s (1934/

2005) describing an art experience as having “a movement of anticipation and culmination, one that finally comes to completion” (p. 39). He stressed the unity of the “artistic” (the act of creating art) and the “esthetic” (perception and enjoyment), and he called this “the intimate union of doing and undergoing” (Dewey, 1934/2005, p. 54). He insisted on the difference of recognition, which is passive and does not lead to an experience, and receptivity, which is an act of “reconstructive doing” through which “consciousness becomes fresh and alive” (Dewey, 1934/2005, p. 54). I experienced a startling illustration of recognition vs. receptivity when our museum education class was at the Frick with Rika Burnham. We had been “invited into” a painting and had been sitting around it, discovering and sharing insights for over an hour. We were totally in the flow. A young high school student, checklist in hand, came running over and pushed into our circle, saying apologetically, “I have to fill out my work-sheet and just want to see the name of this painting and the artist.”

Dewey considered museums to be integral to rich life experiences. He advocated museums as specialized, informal, learning environments for students of all ages but cautioned that museums need to continually test their activities against a criterion of real-life relevance to ensure their continued usefulness to the community outside of their specialized setting.

While Dewey’s progressive approach is a labor-intensive practice requiring teachers to be knowledgeable, intuitive, guiding facilitators, we do believe that Dewey’s experiential approach to education is the blood in our veins as educators.

References

Bryan, M. L. M. & Davis, A. F. (Eds.). (1990). One hundred years at Hull House. Bloomington: Indiana University Press.

Dewey, J. (1907). The school and society. Chicago, IL: University of Chicago Press.

Dewey, J. (1916). Democracy and education. New York, NY: Macmillan.

Dewey, J. (1998). Experience and education. West Lafayette, IN: Kappa Delta Pi. (Original work published 1938)

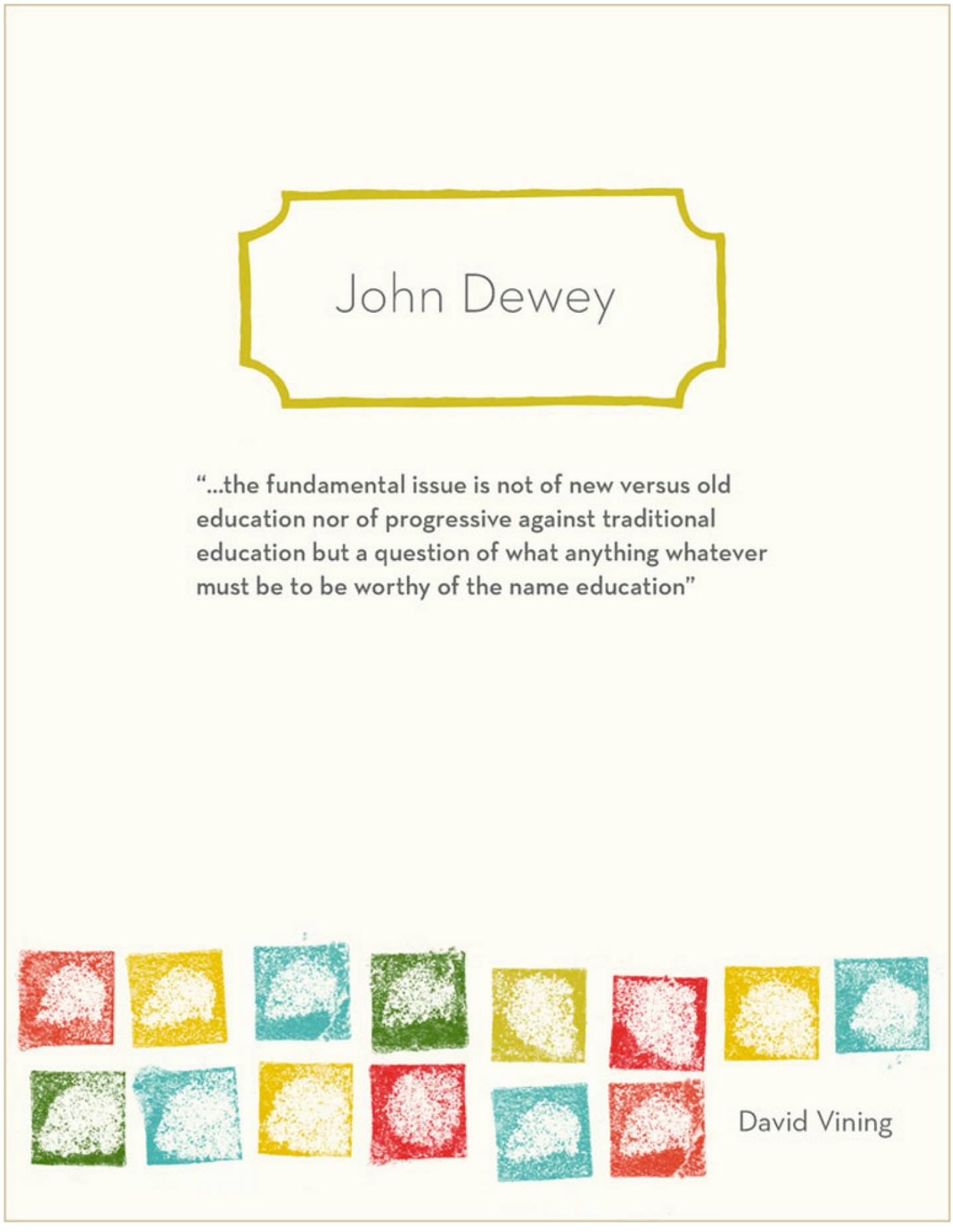
Dewey, J. (2005). Art as experience. New York, NY: Perigee. (Original work published 1934)

Dewey, J. (1990). The school and society: And, The child and the curriculum. Chicago, IL: University of Chicago Press. (Original work published 1900)

2

DEWEY DEFINES HIMSELF, AND EDUCATION, IN HIS BOOK "EXPERIENCE AND EDUCATION"

BY DAVID VINING



In his treatise *Experience and Education*, Dewey (1938/1997) goes to great lengths to combine a few of his core ideas into a new philosophy of education. He separates himself from the "Either-Or… contrast between traditional and progressive education" (p. 17). Instead, he takes as a starting point "that the fundamental unity of the [progressive] philosophy is found in the idea that there is an intimate and necessary relation between the processes of actual experience and education" (Dewey, 1938/1998, p. 115). He then changes the point of emphasis by adding, "If this be true, then a positive and constructive development of its own basic idea depends upon having a correct idea of experience" (Dewey, 1938/1977, p. 20). This is, then, the main goal of the work: to properly explain the "correct idea of experience" and elucidate its central importance to Dewey's theory of education.

To begin, Dewey (1938/1997) aligns himself somewhat with the progressive model, though with a significant caveat. He points out that

> the general principles of the new education do not of themselves solve any of the problems of the actual or practical conduct and management of progressive schools. Rather, they set new problems which have to be worked out on the basis of a new philosophy of experience. (pp. 21–22)

He adds another challenge when he says:

> We may reject knowledge of the past as the end of education and thereby only emphasize its importance as a means. When we do that we have a problem that is new in the story of education: How shall the young become acquainted with the past in such a way that the acquaintance is a potent agent in appreciation of the living present? (Dewey, 1938/1977, p. 23)

Thus, Dewey seeks not only to define an educational experience but also to align it with a cultural history and use this combination of elements to teach children how to live in the world that surrounds them. This discussion of past and present also sets the stage for Dewey's larger idea that education creates a continuum that links experiences—past, present, and future. However, in his typically pre-

cise style, Dewey starts at the beginning by offering his definition of a true or whole or educative experience.

In order to define experience for his purpose, Dewey (1938/1977) first gives examples of “mis-educative” experiences, which he defines as any that have “the effect of arresting or distorting the growth of further experience” (p. 25), adding that “an experience may be such as to engender callousness; it may produce lack of sensitivity and of responsiveness” (pp. 25–26). Such experiences may be effective at teaching a skill, and/or they may be enjoyable, but that is not worth the cost of the consequences. Dewey (1938/1977) further notes that “traditional education offers a plethora of examples of experiences of the kinds just mentioned” (p. 26). In short, one of the failures of traditional education is that the experiences it creates do not expand the individual, but constrict growth of thinking and feeling.

According to Dewey, progressive education, on the other hand, has gained favor because of its democratic and humane methods. He asks if there is a good reason to prefer this, and answers “yes,” if we believe that “mutual consultation and convictions reached through persuasion, make possible a better quality of experience than can otherwise be provided” (Dewey, 1938/1997, p. 34). He stressed that providing the opportunity for a better quality of experience is of utmost importance: “In a word, we live from birth to death in a world of persons and things which in large measure is what it is because of what has been done and transmitted from previous human activities” (Dewey, 1938/1977, p. 39). Learning from experience is thus seen to be hugely significant—a fundamental building block of society. Dewey continues, “there are sources outside an individual which give rise to experience… No one would question that a child in a slum tenement has a different experience from that of a child in a cultured home” (p. 40). And thus,

> a primary responsibility of educators is that they not only be aware of the general principle of the shaping of actual experience by environing conditions, but that they also recognize in the concrete what surroundings are conducive to having experiences that lead to growth. Above all, they should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building up experiences that are worth while. (Dewey, 1938/1977, p. 40)

This statement brings Dewey to one of his more profound ideas about experience. Since we know that exterior factors set up and create different experiences, he warns against any new educational system that ignores them. He also warns against the opposite, saying that one of the great mistakes of traditional education is that it "paid so little attention to the internal factors which also decide what kind of experience is had" (Dewey, 1938/1977, p. 42). What is vital is the interaction of "both factors in experience—objective and internal conditions" that together "form…a situation" (Dewey, 1939/1977, p. 42). In other words, "an experience is always what it is because of a transaction between an individual…and his environment" (Dewey, 1938/1977, p. 43). Again using a negative example to most clearly make his point, he notes:

> The trouble with traditional education was not that educators took upon themselves the responsibility for providing an environment. The trouble was that they did not consider the other factor in creating an experience; namely, the powers and purposes of those taught. It was assumed that a certain set of conditions was intrinsically desirable, apart from its ability to evoke a certain quality of response in individuals. This lack of mutual adaptation made the process of teaching and learning accidental… Responsibility for selecting objective conditions carries with it, then, the responsibility for understanding the needs and capacities of the individuals who are learning at a given time. (Dewey, 1938/1977, pp. 45–46)

Traditional education is a one-size-fits-all experience, and that just doesn't work. The importance of the interaction of the individual and the objective is the crux of Dewey's definition of experience; thus, the individual must be at the center of the curriculum.

Progressive education is strong on the idea of responding to the unique needs of the individual, but Dewey (1938/1977) now comes to his final big test for the progressives—organization:

> It thus becomes the office of the educator to select those things within the range of existing experience that have the promise and potentiality of presenting new problems which by stimulating new ways of observation and judgment will expand the area of further experience. He must constantly regard what is already won not as a fixed possession but as an agency and instrumentality for opening new fields which make new demands upon existing powers of observation and of intelligent use of memory. Connectedness in growth must be his constant watchword. (p. 75)

Dewey reiterates here that organization and selection of subject matter is not always a strong point for progressive education but that if progressive schools are going to be effective, it must be. Freedom and improvisation can and should be used to take advantage of spontaneous opportunities but must not take the place of organization and methodology. Only through careful organization can true growth be achieved. He puts this most simply and authoritatively when he says:

> …experiences in order to be educative must lead out into an expanding world of subject-matter…This condition is satisfied only as the educator views teaching and learning as a continuous process of reconstruction of experience. This condition in turn can be satisfied only as the educator has a long look ahead, and views every present experience as a moving force in influencing what future experiences will be. (Dewey, 1938/1977, p. 87)

In closing, Dewey (1938/1977) expresses confidence in an educational system based on “intelligently directed development of the possibilities inherent in ordinary experience” (p. 89). Throughout his writing, Dewey goes to great pains to be scientific and also to formally rebuke various tenets of both traditional and progressive education. He defines his words carefully, and he links his core concepts in an impressive—though sometimes maddeningly dense—way. But at the heart of it all, his message is relatively straightforward. Experience is the basis of all progress, be it personal, cultural, or societal. The environment defines the nature of our experience, and our individuality (shaped by the sum of our experiences) shapes our response to a given experience at a given time. Education, therefore, will be most effective and most capable of fulfilling the progressive ide-

als of teaching for democracy and humanity if it is a carefully organized, subject-matter-based continuum of well-designed opportunities for individuals to have educative experiences. It may be a mouthful, but for Dewey, all parts of that elaborate potion are necessary for the success of a forward-looking school that teaches children to live in their world and shape the future of our society.

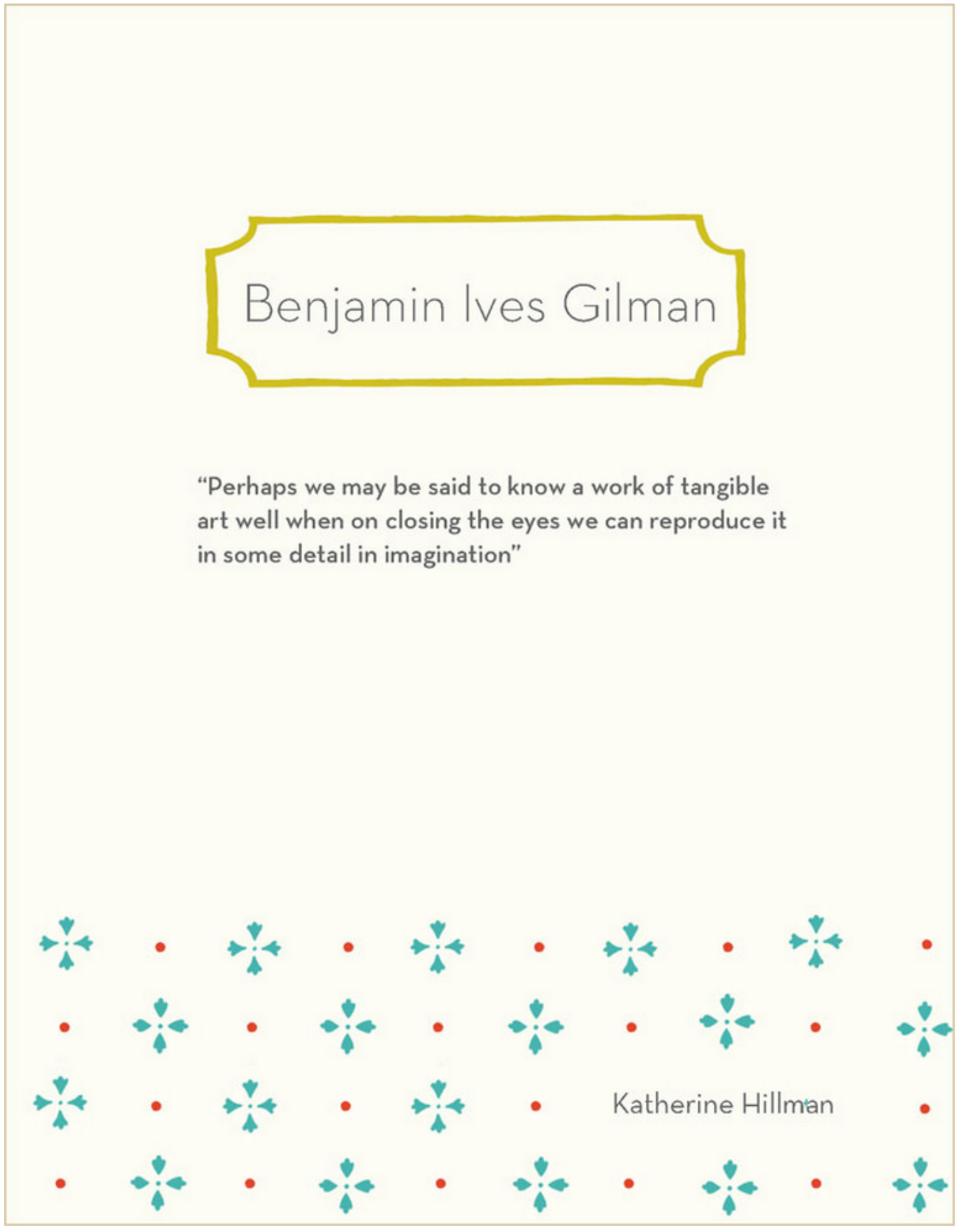
References

Dewey, J. (1998). Experience and education. West Lafayette, IN: Kappa Delta Pi. (Original work published 1938)

3

BENJAMIN IVES GILMAN: ARTS IN PEOPLE'S LIVES

KATHERINE HILLMAN



When I was asked to contribute a chapter about Benjamin Ives Gilman, I balked. Why was I assigned to write about the theorist who wrote in an elitist and patronizing tone about art museum visitors, particularly adolescents and students? Professionally, the only people with whom I've worked in a museum setting were school-age children, and my entire graduate program concerns the relationship between schools and museums, so I found Gilman's dismissal of students' cognitive abilities irrelevant and frustrating.

However, rereading "The Museum Docent" (1915/1984) dramatically altered my opinion, and I now view Gilman's tone as a product of his time and find great value in what he has to say about the viewing of art and the synergistic relationships existing among visitors, docents, artists, and works of art (while I am still appalled at the exclusion of children). He describes art as "one of the forms of human speech" (Gilman, 1915/1984, p. 149), and so much of his theory is about the connections between humanity sharing the joy art elaborates and elevates. To understand the connection that exists between visitor, docent, and art, we need to comprehend each of their unique roles. What is the identity and mission of the visitor, of the docent, and of the artwork?

Born in 1823, Gilman was the secretary of the Boston Museum of Fine Arts at a time when the role of education within a museum setting was nebulous at best. He was one of the first museum professionals to comprehend museums' importance to those other than curators. His extensive writings, focusing exclusively on the importance of art in peoples' lives, are a pedagogical foundation for contemporary museum educators. In addition to writing about museums, Gilman created and brought to fruition the role of the docent within museums. Docents, as well as educators, help merge the worlds of visitor and museum. A visitor is the other half of the artist; viewing a work of art completes it. As Gilman expressed it, "the artistic public, the spectator, [is] the other half of the incomplete being we call an artist" (1915/1984, p. 153). When I think about the relationship between the visitor and the artist, I can't help but think about Plato writing that every human is searching for their other half. Why does an artist create work, and why is this work displayed? What ignites this spark of life in the work when a visitor views it? Can artists and their work exist in isolation, or do they absolutely need to connect

with the rest of humanity for art to serve as a form of human communication? Gilman states that the connection between the visitor and the artist/artwork is essential; in “The Museum Docent,” he discusses various factors that influence the formation of that connection.

First, a visitor does not need to know the historical or professional context of the artist in order to form a relationship with the work. Personally, I am usually drawn to a work on the visual level alone and prefer to read the museum label and its contextual information after experiencing the art work. While there are artists I am drawn to because of their professional and historical contexts, there are just as many works of art I childishly refuse to spend time on simply because of the artist’s historical and professional context. Stripping these works of their context allows me to form an understanding of the work itself because then I am not distracted by my own personal bias or preconceptions.

This point leads to the next aspect of the visitor’s experience that, according to Gilman (1915/1984), influences the connection between the visitor and an artwork: a visitor does not understand an artwork until it is processed the way that the artist intended. How do we as viewers and museum visitors know the artist’s intention? To be completely and totally honest, as a painter myself, sometimes I don’t even know my intention when I sit down to paint. I like playing with color and shape and creating places. On most days, I don’t have a conceptual idea, a grandiose commentary about our world to be shared with those who view my work. Sometimes I paint because I feel that I “should” be painting—otherwise, what was the purpose of earning a bachelor’s in fine art? There are days where I want to feel the sensation of laying paint to page. There are other artists who may have similar intentions, and their human need to express themselves allows me to understand their works simply because I can relate to that urge of self-expression.

Several years ago, I visited an exhibition of J. M. W. Turner’s watercolor paintings at the Tate Museum and immediately felt an understanding (the use of the word “felt” in this context may be unusual; normally we think about matters, but art is sometimes discussed on an emotional level). I felt as if I understood his joy in color, in creating a sense of place, in trying to see something and capture a viewer’s perception of it. I felt as if I understood his intention in painting com-

pletely and was brought to tears at knowing that someone else could feel what I felt. While there are variations in emotions and ideas, doesn't the human race share what it feels like to love, to fear, to be frustrated, and to be sad, along with countless other emotions? A visitor understands and processes a work through an artist's intention when connecting to it on some level, in understanding an element of humanity the work encapsulates—even without knowing the work's historical or professional context.

Gilman (1915/1984) states, "the soul of an artist can be evoked from work only by a spiritual peer" (p. 152). How do you determine an artist's spiritual peer? I think it has something to do with understanding the humanity present in an artwork, whether it's thinking about the human who created it or the emotion or idea that the visitor connects with. I believe this idea of spiritual peers, of visitors becoming the other half of artists, influences why people love certain artworks but not others. When I was in college, a friend of mine suggested we visit the Museum of Modern Art. As we walked through the galleries, she requested that we see Andy Warhol Campbell's Soup Cans as I was begging for a few more minutes in the room filled with Rothko paintings. I tried to explain to her why I needed more time with the Rothko paintings so I could fully absorb them, but I couldn't win the argument, and we moved toward the Pop Art.

I truly believe that not only was it a matter of personal taste that led us to choose different artists' works, but also a matter of finding spiritual peers. Our understanding of specific artworks was entirely personal, influenced by schooling and life experiences, and we were searching for different emotions or ideas, searching for our spiritual peer. Similarly, I once had the opportunity to visit the San Marco Convent in Florence—where Fra Angelico painted on the cell walls—with my professor and mentor. I personally got a sense of the artist's intent, but realized that I was probably not fully connecting with Fra Angelico and his work as my professor did. Watching her reduced to tears as she stood silently in awe of one painting, I couldn't help but wonder what it was like to connect so thoroughly with an artwork.

Visitors, artists, and human beings in general have different experiences that continually build upon each other to form and influence an individual's life, opinions, and values. It is impossible to think that all visitors connect with and understand

an artwork in the same way. This is why I do not understand Gilman's (1915/1984) statement that you "cannot convey to all an equal comprehension of its [an artwork's] theme, owing to the different teachableness of different intelligences" (p. 150), which is one of his main arguments for the exclusion of children from art museums. Of course, there can never be equal comprehension of a theme because each visitor brings unique experiences to his or her observation of the work. My experience and understanding of a work is different from my friend's understanding, and my mentor's, and my family's, but this does not render any of them worthless.

I would argue that although I may understand an artwork in a different manner from an 11-year-old, that doesn't render their experience with the work invalid or unimportant. Does the immensity of a studio art professor's connection with a work by Fra Angelico render a second grader's reaction to that same work worthless? One of the most gratifying experiences I had as a student teacher in a fifth-grade classroom was introducing my students to two paintings: an 18th-century portrait and a contemporary one. We followed a method of observation and discussion modeled upon Gilman's (1915/1984) words, basing our "observations upon its details" (p. 155) and "dr[e]w attention to the object first; [and] talk[ed] about it afterwards" (p. 159). As we spent time looking at the paintings and trying to think about why the pose, attire, and facial expressions were painted in the manner they were, my students' comments and questions led me to understand both my students themselves and their connection to the artwork on a deeper level. They were attempting to understand the artist and subject's intentions and would consistently bring their own experiences to the work in an attempt to explain those intentions. More important than "equal comprehension" is Gilman's (1915/1984) statement that visitors should "nurture individual interests" (p. 149) and choose of their own free will to look at art, and that art viewing in museums can be exciting and joyful; all of which is achievable by students of any age irrespective of their frame of reference.

Feeling enthusiasm and joy for art is one of the main characteristics of museum docents, who must not only have those responses themselves but must help to enable those sensations in the visitor. Docents—whose role was created by Gilman—convey this enthusiasm through tone of voice and body language; to deliberately point out the aspects of the artwork they find exciting or intriguing would

impose their beliefs on the visitor and eradicate any potential for individual interest and enthusiasm. Just as the visitor's role in an art museum is formed through a relationship with the artist, the docent's role is founded on a relationship with visitors. As a docent and visitor view art together, it should be a meeting of minds where they learn from each other and the work. A visitor asks questions about the work and leads the conversation, while the docent is the nurturer and facilitator of the conversation who exudes joy for the work and this experience of looking. Docents provide the potential for people to connect with art who might otherwise feel they cannot, as they assume the role of Virgil to the visitor's Dante.

I agree completely with Gilman that one of the most important elements in the docent's relationship with the visitor is acknowledging and nurturing an appreciation for the details of a work, rather than the generalities. It is these smaller components that can provide opportunities for connecting the work to the visitor's life and the artist's intention. While understanding the context of a work is important, observing the specifics of a work rather than the generalities enables a docent to make the visitor's viewing experience unique and unhampered by the opinions of others. As Gilman (1915/1984) states, we want to "draw attention to the object first, talk about it afterwards, and only if the occasion arises" (p. 159). This succinctly states the optimum relationship between visitor and docent.

While it did not take place in an art museum, an experience I had with school-age children in the Museum of the City of New York speaks to the power of looking at the details of an object in order to gain an understanding of it. When I interned with the Museum of the City of New York's Education Department, we had several objects from the 17th century that students could handle and make inferences about to understand life in New Amsterdam. These included objects such as bed warmers, candle makers, and fire alarm horns. Potentially, students could do close observational comparisons between these objects and contemporary ones which serve the same purpose and, in doing so, understand daily life both in New York City today and in New Amsterdam. Children at the museum formulated ideas about these objects by looking at their shape, the openings apparent in them, and the materials they were constructed with. Form governed function, and the children's eventual conclusions about the objects were formed through their study of the objects' details. This study also showed the students' enthusiasm for handling the objects and relating them to their own lives.

On returning to an art museum, I spent the afternoon as an educator rather than as a visitor and thought about what painting I could enthusiastically look at and share with a potential class of middle school students. As an educator, I subconsciously drew upon many of the qualities and methods of facilitation Gilman urged docents to use, and which I advocate that all educators interested in sharing art with their students use as well. First, allow students to decide which works of art they are drawn to and wish to talk about in order to facilitate a joyful experience. If an educator is unable to allow for student choice due to a constraint of class size or time, I would suggest choosing works capable of facilitating conversation that may lead to many opinions, connections, and thoughts. I eventually decided upon The Horse Fair by Rosa Bonheur, thinking that I could talk about what it was like to be a female painter during the 19th century and contextualize her work with that of her contemporaries.

As I sat and really looked at the painting, I abandoned the historical and professional context. I became enamored with the details, the sense of movement, and the sense of light and shadow that exist within the work. I agree completely with Gilman (1915/1984) about the importance of experiencing a work of art through its details because it is “minuteness, breadth, and deliberation through which alone [the work] can yield its impression” (p. 159). Encourage students to spend several moments in quiet observation, taking in the whole composition briefly, and then ask them to focus on one quadrant and then another. What elements do they notice in the upper left-hand section or in the bottom right quadrant? Students will begin noticing details and elements that intrigue them and which will inform their understanding of the whole. Perhaps in The Horse Fair they might observe the way the light brings to the foreground the three white horses to the right of the composition as the animals turn from the viewer, kicking up dust with their hooves—or how, while remaining unlit, the central horse rears up both in the composition and in the viewer’s line of vision, emanating tension and unbalance. In stark contrast to the loud dynamics of the horses and their riders, I noticed quiet observers sitting under the trees. My observations inspired questions: What would it have been like to have been present there? What would this scene have smelled and sounded like?

I realized that this painting is not about being a female painter in the 19th century but about preserving a moment in time, about a fragment of a much larger time

and life. Why was this one moment chosen for preservation, freezing all of this motion?

To nurture discussion among my students and relate this painting to their own lives, I would ask them if they take photographs and how those captured moments in time preserve memories. I would hesitate to point out specific parallels because I agree with Gilman (1915/1984) that an educator “must not fancy it any duty of his to teach the laws of beauty” (p. 157), but I would include thoughts or contexts that would inspire even closer looking. My enthusiasm for the piece and my attention to its specificities led to an understanding that rendered conversation unnecessary, important methods that educators need to nurture in their students.

While I’ve spoken about the relationship between visitor and artist and visitor and docent, you cannot really separate the relationship that exists among all three: They function at their highest level when in the presence of each other. Museums exist to allow people to see and understand art, to connect with it in some way that combines the artist’s intent and the visitor’s own experiences and emotions. Because of this, the words and actions of a docent should lead toward the art rather than away from it, conveying the docent’s own enthusiasm and joy, which become a catalyst for the visitor’s personal connection to the artwork. When a docent and a visitor look at artwork together, they should spend time using their senses and imagination to form an understanding of the work. A visitor’s bewilderment impedes this connection and removes him or her from the work; at times the presence of the docent is needed for guidance. There is no teaching from something or to someone but instead a culmination of thoughts and emotions that inspire each other.

Earlier this fall I visited the Frick Museum and spent 90 minutes in front of a painting, The Polish Rider, with my peers in the Museum Education Program at Bank Street. At one point, when I was asked to speak further about the work with my nearest neighbor, I found that she did not want to; in fact, she stated that she couldn’t speak about the painting. Without a background in fine art, she claimed she couldn’t connect with the work, and its lack of concrete contextual information impeded her understanding. I think many people feel the same way—that is, that to truly understand an artwork you need to have special training—and young

students may feel the same way, particularly if they feel they are not “good” at art. This is a falsity because all you need is to be part of the human race. There are situations where the conversation with a docent will remove this pain of looking and situations where the visitor is not a “spiritual peer” of the artist and therefore does not want to take the time to understand an artwork. But by focusing on the specifics of a painting, free from the idea that there is correct way of viewing it, looking at art of your own inclination will transform this looking into an understanding relevant to your own life. Educators can help guide students in the observation of works, encouraging an understanding and removing fear by constantly exposing their students to visuals and asking their students to really look at them. Initially, model observational thinking by sharing aloud what you notice about a work. This will help students construct a way of looking at art. After facilitating repeated exposure, an educator can pull back from modeling to allow students to develop their own thoughts and notice the elements intriguing to them personally. In whole-class settings, remind students to take the first few minutes for quiet observation before sharing thoughts, to allow individuals to develop their own observations without being influenced by their neighbor.

I am an artist, a museum visitor, and a museum educator who wants to have these understandings and enable others to have them as well. I know the challenges in all of these roles, and I have felt the successes too. When viewing the exhibition Slash: Paper under the Knife at the Museum of Art and Design, I felt my joy mirroring the artists’ exuberance in their material and the infinite number of ways paper can express ideas. I felt as if I understood their intentions; “of course,” I thought, as I looked at a particular work, “the paper was cut precisely there, what other choice could the artist have made to represent her idea?” As an artist, I lose all sense of time when I apply my brush to the page and layer colors upon one another. I don’t know what others think of my work, but their personal interpretations are part of the whole. As an educator, I want to help others feel joyful as they experience an artwork and make it relevant to their personal lives and interests. In all of these roles, I take to heart Gilman’s (1915/1984) statement that “perhaps we may be said to know a work of tangible art well when on closing the eyes we can reproduce it in some detail in imagination” (p. 160) because the ability to know art well and to feel in some way attached to it is the mission of all who visit museums through their own joyous inclination. Educators in museums of any

kind and classroom educators can help their students exuberantly experience visuals by referencing Gilman, the man who earnestly thought about museums and their public, in the following ways: Have students look. Have them look closer. Ask them to think about what interests and excites them. Listen to what they say.

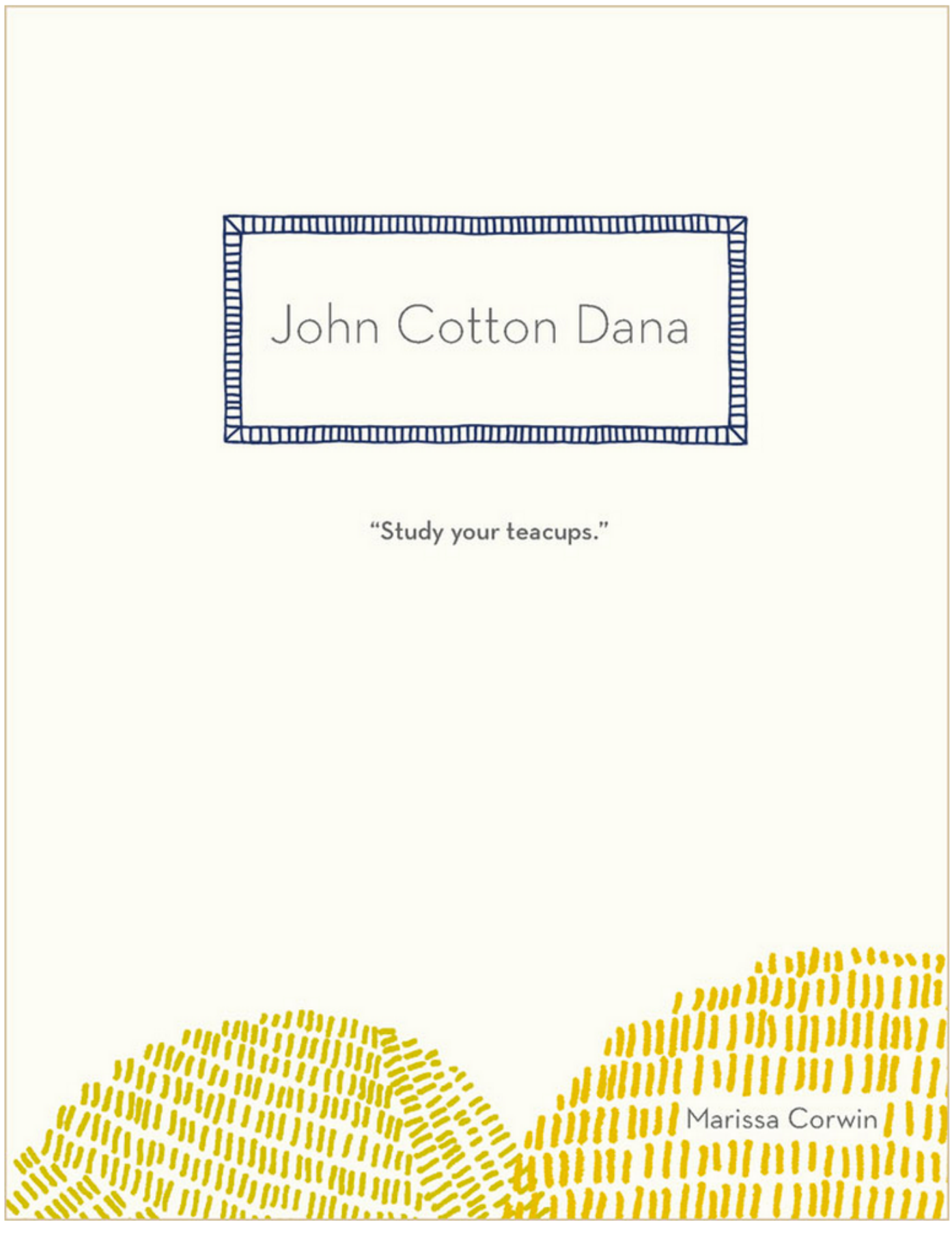
References

Gilman, B. I. (1984). The museum docent. In S. K. Nichols, M. Alexander, & K. Yellis (Eds.), Museum education anthology, 1973–1983: Perspectives on informal learning (pp. 148–162). Walnut Creek, CA: Left Coast Press. (Original work published in 1915)

4

JOHN COTTON DANA: THE SOCIAL CONSTRUCTION OF MUSEUMS

BY MARISSA CORWIN



In the early 20th century, while most art museums were clamoring after established European painters, John Cotton Dana was creating exhibitions that asked the American public to stop and examine the vessels they drank from daily. Dana not only felt that much could be learned from a teacup's design, but at a time when the ceramics industry was flourishing in his home state of New Jersey, he was also calling upon the public to see the value in what was being locally produced. He felt that a museum was only as valuable as it was useful and that it should reflect the needs and creations of the surrounding community. Dana's vision of a museum's potential to inspire and inform, while reflecting the changing needs of the local population it serves, has shaped critical aspects of contemporary museums we often take for granted. At a time when financial constraints make it less feasible to execute the blockbuster exhibits that have long been many museums' tool for drawing in larger audiences, we would be well advised to heed Dana's word about taking advantage of our local resources. The members of education departments in museums are well poised to play an active role in this endeavor, as they are the staff who are able to spend the most time with museums' constituents. Dana's experience working with various institutions of learning to create educationally driven exhibitions makes his thinking a particularly suitable model for museum educators to consider.

Building on a life's work of service to the public as a librarian and ultimately as a library director, Dana sought to make art as accessible as he had made books. He expanded into the world of museum directing in his mid-fifties when he established the Newark Art Museum in 1909, while he simultaneously developed the Newark Public Library into one of the most successful in the country. In Newark, he finally had the space to bring physical form to his theories of what exhibitions and the institutions that house them have the potential to be. His published writings from that period examine the limitations of museum effectiveness and project ideals of what might be possible, given serious reform. With a keen eye to hypocrisies in a class-based society, Dana worked to create a new impression of the role a museum could serve.

While it now seems to be common sense for a museum to be established in "the centers of daily movement of population" (Dana, 1917/2004, p. 20), when Dana

entered the scene, museums were most often located on the periphery of cities, isolated in parks, and reachable only by carriage. Dana bemoaned the inaccessibility of institutions that professed to serve the public, but truly only catered to the needs of the elite. He also questioned the spending habits of wealthy Americans and their assumption that only oil painting and sculpture could represent good taste. Dana championed the importance of exhibiting and promoting industrial design and encouraged other institutions to expand their ideas of what was worthy of museum display. He was the first to promote American folk art and American artists and wrote extensively on the need to financially support and encourage local artists of all stripes. He was in no way opposed to the display of historic artifacts; indeed, he felt much could be learned by comparing old and new models of the same type of object. However, he was wary of the black market of curios or what he termed the wares of “archaeologists, excavators and importers” (Dana, 1918, p. 71). He preferred instead to showcase local photographers and the wealth of industrially manufactured goods that New Jersey produced at the time.

Many of Dana’s ideas about how to best capture the attention of the public were developed during his years as a librarian and library director. By the time Dana founded the Newark Art Museum, he had 40 years of public service under his belt, which gave him immense insight into strategies that community centers could effectively use to attract the public and sustain people’s interest. He felt that the public school system, museums, and libraries should all join forces to best take advantage of their shared resources, and was ultimately able to realize that vision through his work in Newark.

Dana’s spirit is alive and well at the current Newark Museum of Art, where his ideas about museums still influence much of what is found throughout the halls there. The Newark Museum has maintained connections to the local public schools and houses an extensive library that is linked into the Newark public library system, allowing anyone with a library card to access the museum library’s collections. Dana believed that providing arts education was a way to engage and inform the public, and especially children, about art appreciation. That commitment remains strong to this day at the Newark Museum with its Junior Museum program that creates extensive programming for local school children. Because Dana envisioned universal ideals that were not built around a specific

time, place, or culture, the words he spoke at the beginning of the 20th century feel just as relevant in the 21st.

When Dana was directing the Newark Museum, the city's immigrant population were largely working-class Europeans. Newark is now made up of a predominantly African American community, and the current museum's staff, visitors, and programming reflect that. Exhibits like a recent one focusing on Ghanian beadwork delve deeply into regional African issues rather than just providing continent-wide generalizations that are often seen in museums. The museum's Black Film Festival, free to the public, is the longest running one in the country and nurtures the talent of young black film makers by providing a forum for progressive work. This programming arrived long after Dana was gone, but because the idea that institutions should evolve with their constituents was at the core of his beliefs, he in no small way is responsible for the continued relevance of this museum. Indeed, it is his ability to not place himself at the center of his theories, to acknowledge the power of the collective fund of knowledge of his professional peers, and to pass the torch on when the time was right, that allows us to remember him as the great thinker he was.

References

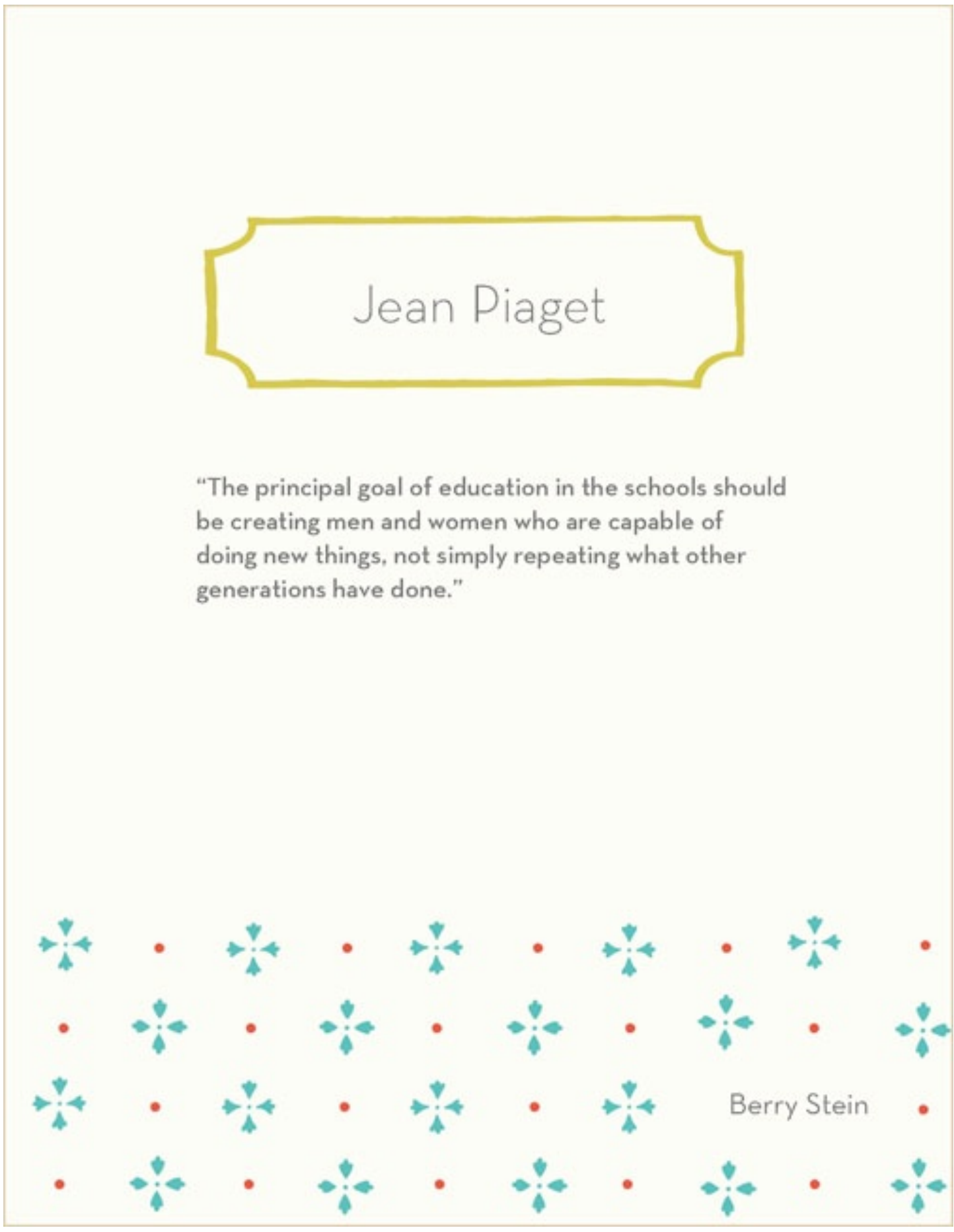
Dana, J. C. (1918). The value of the study of art in our institutions of higher education. The Bulletin of the College Art Association of America 1(4), 69–83.

Dana, J. C. (2004). The gloom of the museum. In G. Anderson (Ed.), Reinventing the museum: Historical and contemporary perspectives on the paradigm shift (pp. 13–29). Walnut Creek, CA: Alta Mira Press. (Original work published 1917)

5

PIAGET IN THE ART MUSEUM: CONSTRUCTING KNOWLEDGE THROUGH ACTIVE ENGAGEMENT

BY BERRY STEIN



It can be argued that the leading contributor to the study of cognitive development among children is Jean Piaget (1896–1980), Swiss developmental psychologist and epistemologist. The impetus of Piaget's study of child cognitive development was his work done at the Binet Institute in the 1920s, when he was hired to develop a French version of an English intelligence test. While doing this work, Piaget recognized that young children consistently gave wrong answers to certain questions, and he began to wonder why a child's thought processes were different from an adult's. This question drove his life's work and led him to theorize about cognitive development. Because he was a pioneer in constructivist learning, his theory addressed the question of how children arrive at what they know and identified the answer: children construct their own knowledge by giving meaning to the people, places, and things in their world.

Although cognitive development is widely understood in contemporary society, before Piaget's work there was a common understanding that children were simply less capable thinkers than adults. Piaget's theory refuted this belief, as he explained the discrete processes by which the infant, and then the young child, develops into an individual who is capable of thinking in a rational, logical manner. According to Piaget (1953), children sort the information that they acquire through their progressive life experiences and interactions into groupings known as schemas, the building blocks of knowledge. Children progress through a series of four essential stages of cognitive development, acquiring new knowledge and constructing their own meanings of the world around them. He identified the four stages of development as sensorimotor, preoperational, concrete operational, and formal operational. The sensorimotor stage occurs from birth to age two, when children are learning through senses and reflexes. The preoperational stage follows with children ages two to seven, when they begin to form ideas based on their perceptions and inevitably overgeneralize based on their limited life experience. Next, in the concrete operational stage, children between the ages of seven and 11 or 12 begin to form ideas based on reasoning, and they limit thinking to objects and familiar events. Finally, the formal operational stage occurs in children ages 11 or 12 and older, and it is at this point that young learners possess the capability to think conceptually and hypothetically.

Piaget (1953) believed that during the transition from one stage to another, children undergo a process of adaptation to the world through assimilation, accommodation, and equilibration. When new knowledge is acquired, it can either be assimilated into existing schemas or accommodated through the revision of existing schema or the creation of an entirely new category of information. Equilibration, the force that moves development along, occurs when a child's schema accepts new information through assimilation. When new information cannot be fit into existing schemas, children experience disequilibrium and thus must seek a way to form a new cogent understanding of information (accommodation).

Piaget's impact on the field of child development was profound, and I would argue that elements of his theory of cognitive development have played an instrumental role in the practice of many museum educators today. It is my understanding that in several art museums across the country, young visitors who participate in educational programs are simultaneously learning about and practicing art as a way to explore a certain artist or art movement on a deeper level. According to Mooney (2000), Piaget believed that "children learn best when they are actually doing the work themselves and creating their own understanding of what's going on, instead of being given explanations by adults" (pp. 61–62). At the Whitney Museum of American Art, I have assisted with numerous family programs featuring unique opportunities for young learners to create hands-on art projects inspired by discussions and activities in the museum's galleries. In a program based on a permanent collection exhibition, young children ages seven to nine (in the concrete operational stage) learn how artists work in different ways, using Roy Lichtenstein, Ellsworth Kelly, and Georgia O'Keeffe as examples. After a brief in-gallery introduction to each artist's work, young learners return to the art studio to engage in an art-making activity exploring concepts such as line, color, shapes, and composition. As they create their own works, they are inherently creating their own understandings and attaching personal meaning to the content explored in the gallery.

Mooney (2000) also draws parallels between Piaget and Dewey noting, "Like Dewey, Piaget believed that children learn only when their curiosity is not fully satisfied" (p. 62). Through firsthand experience, museum educators in contemporary art museums often play the role of the facilitator rather than the instructor, posing open-ended questions and providing activities that support children's engage-

ment and enthusiasm to learn more. With open-ended questions and activities, children are offered the flexibility of not having to be right or wrong. Instead, young learners are in a position of inquiry. I would argue that contemporary art museums are particularly fertile grounds for a young learner's cognitive development, as much of the work that fills the galleries is open to interpretation, and viewers of all ages are encouraged to take their own approach and make meaning that is not necessarily right or wrong. In this setting, educators nurture inquiry and support the young learner's journey toward understanding.

Like Dewey, who emphasized "learning by doing," Piaget emphasized the primacy of construction rather than instruction. Further, Piaget's belief that the processes of accommodation and assimilation reinforce an individual's understanding of a particular subject based on prior experiences can be seamlessly integrated into the constructivist approach; when students integrate their own knowledge and experience into learning content-specific information through active engagement, meaning is manifested in each learner. Constructivist learning cultivates an environment that inherently places demands on students to think abstractly, communicate clearly, and retain both conceptual and content-specific information. The constructivist educator is accordingly faced with the challenges of establishing an environment that promotes dialogues between learners and presenting tasks that direct students to engage and reflect upon concepts and ideas that enhance knowledge and understanding. How does a teacher structure learning this way and also manage to track the progress of each student's cognitive development? Within this approach, the primacy of the teacher is found in his or her ability to foster an environment where students create the framework for learning through social engagement (accommodation) and reflection (assimilation).

A firsthand experience with a group of preteens well into Piaget's formal operational stage who participated in another Whitney Museum educational program best exemplifies Piaget's argument for the constructivist approach. The program, an exploration of select groupings of artwork in the museum's collection, is intended to promote a forum for ideas, debate, and exchange based on a theme that loosely ties particular artworks together. The exhibition that this particular program was centered upon featured works by Joseph Cornell, Alexander Calder, and Jacob Lawrence. As the students explored the galleries, the educator was deeply effective in activating those young learners' intellectual development

through her posing of open-ended questions and activities. While standing in front of a Cornell installation, the educator asked the students to think about something interesting, exciting, or unusual that they had recently learned. One student mentioned learning that NASA had discovered millions of Earth-like planets in distant galaxies. There were several unusual and quirky insights made by the students, consequently leading to each participant's knowledge base increasing a little bit more that day.

Next the educator asked what objects or images the students might use to represent this new fact. In posing open-ended questions, she was fostering a space for peer interaction and fertile dialogues. After they had discussed their ideas, the students were given the opportunity to explore their personal reflections in the form of an art-making activity where they made their own "idea box," as inspired by Cornell's boxes. The young boy who had discussed the interesting NASA discovery made a diorama of space that was as unusual and one-of-a-kind as an original Cornell box. This technique of encouraging critical dialogues pertaining to an artist's motivation and method inspired students to think like artists and explore, using the variety of materials provided. The making experience in the studio seamlessly connected to the looking experience in the galleries.

Another key aspect of Piaget's theory that I have witnessed in the museum context is the educator posing the "second question" that causes disequilibrium for students. This enables young learners to move beyond what they know and believe through their own life experiences to a deeper level, where some form of either concrete operational or formal operational thought can be brought into play. In the spring of 2012, a group of teens who participated in the Whitney Museum's Youth Insights program collaborated with contemporary artist LaToya Ruby Frazier to create photographs that documented their transforming selves, neighborhoods, and other public spaces in the city. They examined the effects of advertising on society and the ways that individuals make everyday choices. Teens also watched and discussed excerpts from two British documentary series, Century of the Self and 7 UP, to further understand the links between propaganda, advertising, and the ways in which social class affect an individual's future. Over the course of the 12-week program, the artist-educator posed many "second questions" relating to deeply complex contemporary societal issues, and the level of disequilibrium within each student was palpable. Many of the students struggled

to grasp some of the issues, and the process of accommodating this new information was not quick and easy.

Several of the sessions with Frazier included the teens sharing personal histories with one another. In a particularly poignant blog entry, a teen participant acknowledged:

> We noted how the diversity of all our backgrounds will cause certain opportunities to arise at different times of our lives. I think I can speak for most of the group when I say that we have become more wary of the misleading information that advertisements can communicate. It is powerful to consider the ideas and constructs that advertisements can project.

A big theme for the evening was the exploration of sociological boundaries placed on each one of us due to expectations or systems in our lives and communities. In sharing what made us different, where we came from, and how we see ourselves, we gained insight into how we are part of a social reality that has been collectively constructed. We looked at the ways that social phenomena institutionalize who we are and how we will progress whether we are conscious of it or not. All of us left that evening with a greater respect for one another, bound by our recent introduction into interpreting our world. (Robert, 2012)

This newfound awareness is wholly powerful and was uniquely formed within a contemporary art museum. In the study of Piaget, it is clear that what is essential to the process of development is an educator who continually challenges young learners to think more deeply and more abstractly at both the micro level (i.e., of a particular art work) and the macro level (i.e., of the world around them). Through raising questions that do not necessarily provide direct answers, educators reinforce the notion of individual self-discovery. This type of engagement undeniably promotes a corps of self-motivated individuals who are able to think critically and can address problem solving at progressive levels of complexity.

References

Mooney, C. G. (2000). Theories of childhood: An introduction to Dewey, Montessori, Erikson, Piaget & Vygotsky. St. Paul, MN: Redleaf Press.

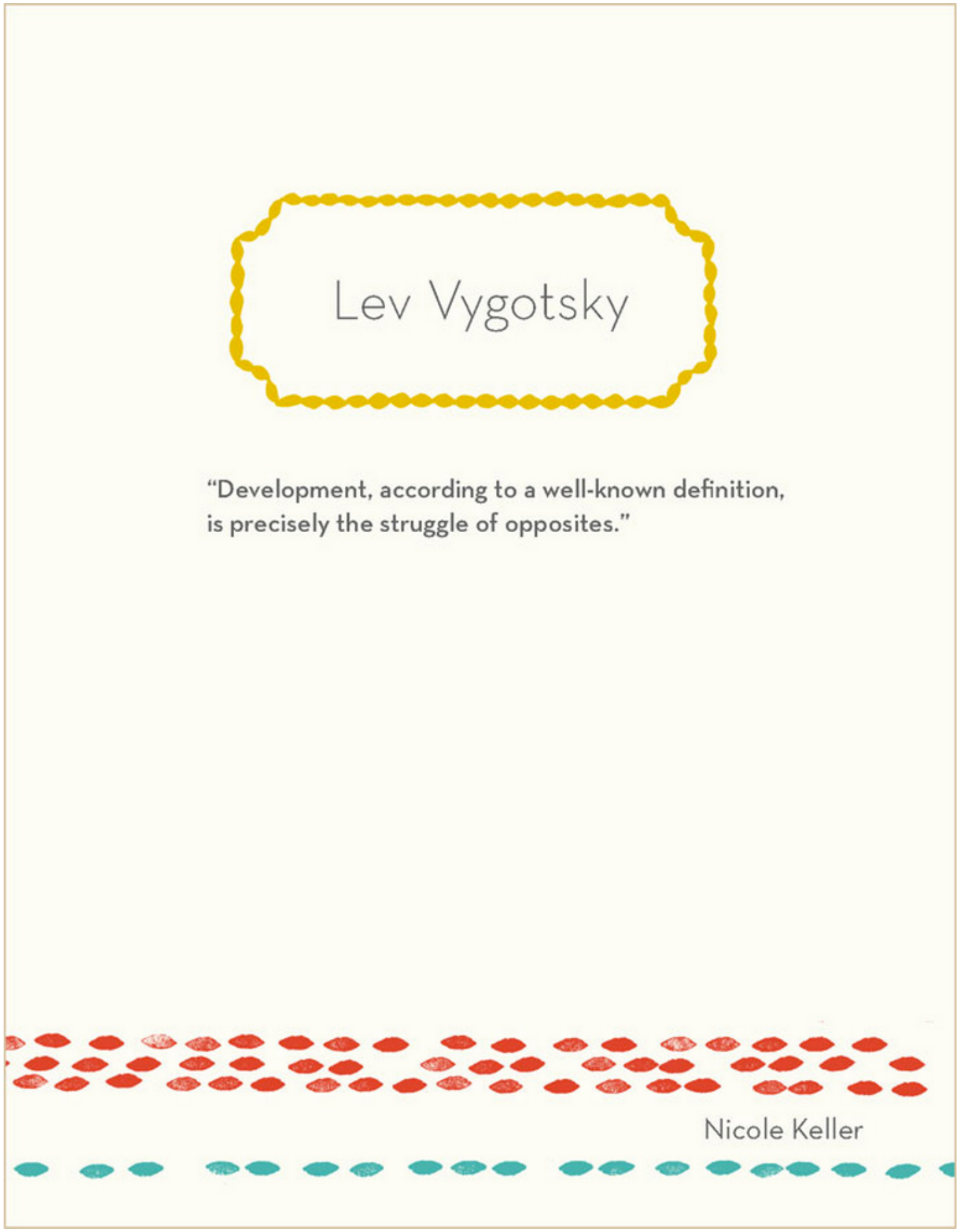
Piaget, J. (1953). The origins of intelligence in children. London, England: Routledge & Kegan Paul. (Original work published 1936)

Robert. (2012, April 5). YI artists meet with artist-in-residence Latoya Ruby Frazier [Web log post]. Retrieved from http://whitney.org/Education/Teens/TeensBlog/YIArtistsWithLaToyaRubyFrazier

6

LEV VYGOTSKY: THE SOCIAL ASPECTS OF LEARNING

BY NICOLE KELLER



We are all products of our environment, at least in part. The experiences we collect, the encounters we have, and the challenges we face all build upon one another and lead us down a winding path that determines who we are and what we become. This is true not only of students in our institutions, but also of Lev Semyonovich Vygotsky, one of the great contributors to our understanding of learning and development. Born in 1896 in Orsha, Byelorussia, Vygotsky grew up in a small town with a strong cultural life near the Ukrainian border and within the Pale of Settlement. It is not coincidental that Vygotsky's ideas—which draw heavily upon social, cultural, and historical contexts to understand how children learn—emerged from within such a confined setting in czarist Russia. Following a trajectory determined by his own social, cultural, and historical contexts, Vygotsky's career began with a stroke of luck. He was among the top 3% of Jewish students eligible to enter the university during his time, and by a twist of fate, he was among those selected through random lottery for admission. While his course of study at Moscow University was restricted due to his religion, his simultaneous enrollment in an unofficial institute of higher learning permitted him to explore his real passions—philosophy, the arts, and eventually, psychology.

Following the completion of his studies, Vygotsky returned to his hometown where he began deepening his study of psychology by starting a research laboratory and also reading extensively—he was literate in eight languages—about philosophy, psychology, pedagogy, and the arts. Ironically, though he possessed facility in English and was highly versed in the theories of Piaget and Freud, Vygotsky's context would prevent his later work from being shared with such thinkers in the United States. Despite his limited contact with the larger world, Vygotsky thrived in post-Revolution, Marxist Russia and enthusiastically spearheaded a Marxist theory of psychology and child development that emphasized both the role of language as a cultural tool and the zone of proximal development (ZPD). He wrote:

> We propose that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal development processes that are able to operate only when the child is inter-

> acting with people in his environment and in cooperation with his peers. (Vygotsky, 1978, p. 90)

Aware that nobody learns in a vacuum, Vygotsky made astute observations about the behavior of children that led him to develop the theory of learning and development that would become his legacy in the field of education.

Vygotsky died in 1934, when he was just 38 years old. The repressive political regime in the Soviet Union under Stalin at that time severely suppressed the spread of Vygotsky's ideas abroad. His works began to resurface following Stalin's death in 1953, yet their translation into English was even slower in coming. Scholarly exchange was extremely limited between the Soviet Union and the United States during the Cold War, and America was deeply invested in behavioral psychology and Piagetian perspectives during that period. Only late in the 1960s did English translations of Vygotsky's work finally begin to appear, take hold, and influence the work of educators in learning institutions in the United States.

Bruner (1986) said that "the language of education is the language of culture creating, not of knowledge consuming or knowledge acquisition alone" (p. 133); similarly, learning for Vygotsky is a communal process, one in which exchange between individuals occurs and, through that exchange, meaning is genuinely made. For both Bruner and Vygotsky, true education requires interaction and demands individual agency. Knowledge cannot be given to us; rather, we must act as collaborators in the construction of our worlds. Vygotsky (1978) demonstrated that a child has both an "actual developmental level", as well as a "level of potential development" (pp. 85–86). The ZPD is the difference between these two planes of achievement, and it is a fuller portrait of a child's abilities. Vygotsky saw the phenomenon of one child in a classroom working in a partnership or group and successfully accomplishing a task she or he might have struggled with alone as proof of this theory. Vygotsky believed that a child's capacity to achieve with the scaffolding of others was the greatest indicator of mental development, even more telling than what she could do alone.

Children, from their earliest days, learn by interacting with stimuli in their environments, and even as we grow older, learning continues to be a give-and-take with

the world around us. Through his body of work, Vygotsky affirmed the social nature of learning. As a logical extension, the most fruitful encounters for a person are those that provide the time and space for engagement with others. For educators working in museums and other informal learning institutions, Vygotsky's ZPD can still guide our practice, both when we engage visitors directly, and as we plan self-directed exhibitions and programs.

At the Frick Collection, Rika Burnham demonstrates the powerful way in which a skillful educator can challenge students to cocreate rich and meaningful encounters with art—"experiences," in the Deweyan sense of term (Burnham & Kai-Kee, 2005). For both Dewey and Burnham, these experiences require time: time to remain with one painting or object, time to wonder, time to crescendo toward some meaty end. Last year, I had one such experience when I visited the Frick with fellow Bank Street museum education students. We perched on small stools scattered around a muted painting of a man on horseback and, through a series of open-ended prompts from Burnham—in which we were invited to share observations or questions, move about to consider the painting from varying angles, and respond to one another's replies—I found the surroundings slip away and time slow down. At the most opportune moments, Burnham would introduce a piece of information, an anecdote, or an excerpt from some conservation text, tactfully chosen to challenge us, elevating the quality of our thinking to heights we might not have achieved on our own. Recognizing the responsibility of the educator to activate the ZPD, she explains:

> We must communicate our own commitment to the shared enterprise of seeing, our belief that looking together and talking about art is a valuable and significant experience for us, too. Our manner must assure visitors that we are knowledgeable about the artworks in our collections and skillful in bringing people and artworks together in meaningful ways. Side by side, the instructor and students will investigate the works of art. Everyone must trust from the outset that his or her understanding will increase as a result of the experience. (Burnham & Kai-Kee, 2005, p. 68)

Only significantly into our session did I learn that the mysterious painting of a young man and eerily translucent horse was Rembrandt's The Polish Rider, and

while this was an exciting discovery, it was not the most important one made that day. The meaningfully meandering path of our collective journey, the attentively problem-posing nature of Burnham's stance, and the collaborative inquiry on all our parts allowed us to delve more deeply and think more critically than we could have alone. The subsequent learning had a lasting impact that has remained with many of us over time.

An educator need not always be physically present, however, for the ZPD to ignite in a museum or other institution. Take, for example, the World Brooklyn exhibit at the Brooklyn Children's Museum, an interactive microcosm of the larger neighborhood beyond. Here children engage with one another in a variety of child-sized storefronts that represent the many cultures of Brooklyn, from the Chinese stationery store to the international grocery to the Italian pizza shop. On any given day, kids of all ages work and play side by side and collaboratively in World Brooklyn. In the grocery, I once observed two children, a boy about three years old and a girl about six, both interested in the electronic conveyer belt that sent scanned groceries down to the bagging area. The boy stood mesmerized for minutes, holding objects near the belt's end and watching them roll off. At a certain point, the belt became stuck and the boy began to poke at it with frustration. Observing this, the girl made her way over and showed the boy how to press the button to turn the belt back on. Together, they then loaded the contents of her basket—plastic baguettes and empty milk cartons—onto the conveyor belt, the girl showing the boy how to catch them with the basket so they did not roll onto the floor. Without adults directly participating in the two children's interaction, the older and more experienced child managed to help the younger child discover something new. Educators had created a space in which children could explore and investigate machines and motors as well as the phenomena of their daily lives; and within this space, without direct support, the children were able to work together to create an experience richer than either might have had alone.

Vygotsky's legacy lies in this question, in which both the joy and the challenge in the field of museum education arise: How much do we guide others in their acquisition of knowledge, and how much should this process be individual and experiential? The answer may rest in the understanding of how to successfully scaffold experiences for visitors in our institutions. That is, if we acknowledge that optimal learning occurs in a context defined in part by assistance in the form of language

and social contact, then we must seek to provide ample opportunity for dialogue and interaction in our spaces.

References

Bruner, J. (1986). Actual minds, possible worlds. Cambridge, MA: Harvard University Press.

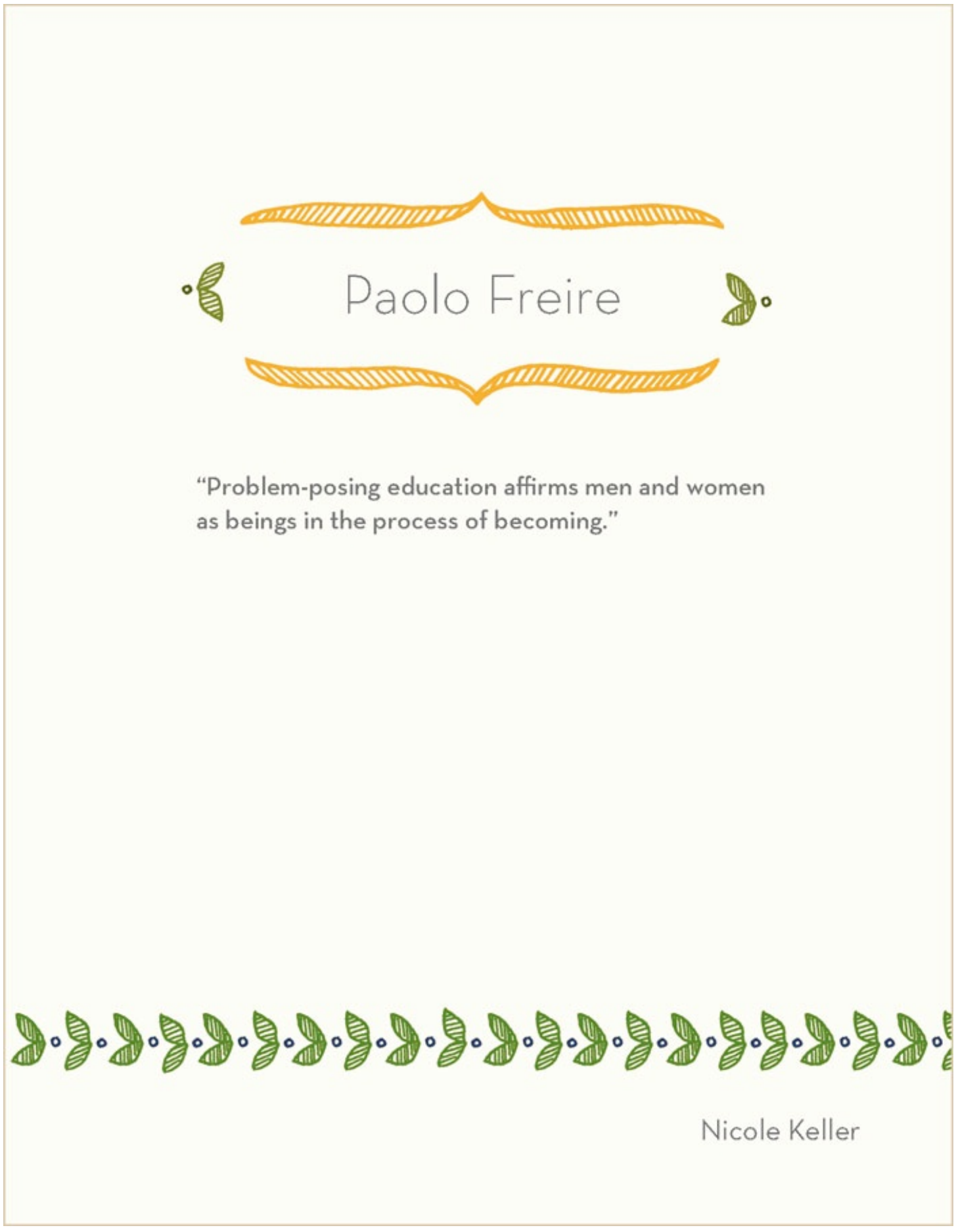
Burnham, R., & Kai-Kee, E. (2005). The art of teaching in the museum. Journal of Aesthetic Education, 39(1), 65–76.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.). Cambridge, MA: Harvard University Press.

7

PAOLO FREIRE: LITERACY, DEMOCRACY, AND CONTEXT

BY NICOLE KELLER



We have looked at how Maxine Greene, Paulo Freire, George Hein, and Rika Burnham each draw on constructivist theory as well as on John Dewey's theory of experience in their work. Although each author employs this philosophy toward a unique perspective on its meaning and implementation, all touch on five central themes that are either aspects of or prerequisites for constructivist learning. These themes are time, silence and listening, meaningful and deliberate experience, possibility and freedom, and—implicit in the latter—trust.

We are advocating a teacher-learner relationship called constructivism, which, according to Hein (1991), requires that each learner, individually and as part of a group, "constructs knowledge for themselves" (p. 2). The emphasis is on the learner, rather than on the lesson. In order for learners to be able to make meaning for themselves, they need time to return to the same subject more than once, to reflect and explore deeply, to engage in the flow experiences championed by Csiksentmihalyi. "It takes time to learn: learning is not instantaneous," writes Hein ("Principles of Learning," para. 9). "For significant learning," he continues:

> we need to revisit ideas, ponder them, try them out, play with them and use them. This cannot happen in the 5–10 minutes usually spent in a gallery…If you reflect on anything you have learned, you soon realize that it is the product of repeated exposure and thought. (Hein, 1991, "Principles of Learning," para. 9)

Several of the contributors to this book have been particularly attracted to Burnham's teaching method. She echoes Hein's argument, noting the importance of the element of time "in all aesthetic encounters" (Burnham & Kai-Kee, 2005, p. 67). Although this element may seem minor in comparison to what will follow here, my own experiences as an educator and as a learner have convinced me of its significance, especially in settings in which learners are empowered to make their own meaning.

The most exciting learning I experienced as a child occurred outside of school, specifically in museums and parks that I visited repeatedly and frequently over years. It was in these settings that I truly constructed my own meaning and that I was intrinsically motivated to explore, play, and reflect. It is these experiences

that I remember more than any activity or lesson from elementary school. To give one example, I remember my many visits to the Metropolitan Museum of Art vividly. I spent so much time there that whenever I visit now I experience a wave of nostalgia similar to the way I feel passing the house I grew up in. It was comforting and familiar, yet magical in that it always contained something new and wondrous for me to unearth. As a child, I would wander the American Wing again and again, imagining the people who might have lived in the period rooms, or I would draw in the sculpture garden, or peer into the cases of Byzantine artifacts. Then as I got older, I would float through the rooms of modern paintings, looking for each in its right place, a familiar face in the crowd, and notice new colors or elements of composition I had never considered before. It was these experiences, I am convinced, that led to my love of history and of art because through repetition and revisiting, the objects I saw came both came alive for me and became a part of me.

We have looked into classrooms of both museums and schools and have seen that many classroom teachers are rarely afforded the authority to decide how time is used. There is so much material to be covered, and often schools resort to very rigid scheduling to manage the demands of testing and state curriculum standards. In the older grades, due to curriculum standards, time may be an even more crucial—if missing—commodity. We have pondered how we can teach for meaning and allow students to take agency over their learning when we are compelled to teach topics superficially and at a breathtaking pace. Moreover, how can you leave room for silence and listening without adequate time?

Both silence and listening take time and are fundamental in the context of communication and listening, which are, in turn, essential to learning, writes Freire (1998). Silence affords the listener, whether the teacher or student, an opportunity to focus on listening in the fullest sense, of “being open to the word of the other, to the gesture of the other, to the differences of the other” (Freire, 1998, p. 107). Several of our contributors have referred to Burnham, who likewise advocates the need for “a place for silence as well as for speech” (Burnham & Kai-Kee, 2005, p. 68). During our graduate class experience at the Frick, she did, in fact, leave space for silence, telling us to “take a few minutes to look” before we began our conversation. This set the tone for subsequent comfortable silences during our time with her. Often, after an insightful comment, the group would

lapse into reflective silence in which we would take time to look at the painting even more closely.

My experience has led me to believe that many educators are uncomfortable with true silence, even as they demand it from their students while they are speaking. Too often, teachers—including myself—express anger or disappointment when not every hand goes up immediately after they have asked a question. And then on the flip side, I have seen teachers in "conversations" with students in which the teacher's is the only voice heard, even in a setting explicitly intended for mutual communication—or in Freire's (1998) words, for "speaking with," rather than "speaking to" (p. 105). If, as Freire writes, "to teach is not to transfer the comprehension of the object to a student but to instigate the student, who is a knowing subject, to become capable of comprehending and of communicating what has been comprehended" (1998, p. 106), then affording students the opportunity to listen and be listened to by peers and teachers is essential to their learning.

We have examined how students need to be listened to in a meaningful way—not merely through show and tell or in response to narrow questions and tasks. As a student teacher, I led a trip to a local park to look for wild edibles. As a follow-up, I endeavored to engage the students in open-ended and critical thinking based on our experience. After sharing and drawing a representation of something they learned on the trip, the students chose one of three reflection questions about the role of Lenape women to discuss and answer with a partner and then shared their thoughts with the class. They came up with wonderful ideas, including possibilities I had not yet considered or imagined.

Although the trip itself was exciting and meaningful, much of the meaning of this activity was constructed in the classroom before and after our adventure. I was fortunate to have the time for a post-trip lesson, and in an ideal world, would have done yet another post-trip activity, but time again was the limiting factor. Museums cannot always control what kind of experience happens in classrooms. Even programs with pre- and post-trip classroom educator visits or repeat museum visits may be limited in duration and scope. Museums can and should, however, so embed themselves in their communities that any experience within their bounds automatically connects to previous and subsequent related experiences. Thus the context of a museum experience may be an element of programming or

resources provided to classrooms or a factor that perpetuates the communicative circle in which the museum is fundamentally responsive to its community.

The instrumentality of context recalls Dewey's (1938/1997) ideas about what qualifies as experience in education. "Everything," he writes, "depends on the quality of the experience which is had" (p. 27). For an experience to truly lead to learning, it must not occur in isolation; rather, it should be part of a continuum of experiences that draws on learners' previous experience and informs or influences future experiences. Going to the park is fun, but for it to be a meaningful learning experience, it must be grounded in prior and subsequent learning experiences, whether as part of a program or through independent teacher or parent initiatives.

That an experience informs future experiences, however, does not suggest that the sole purpose of learning experiences is preparation for the future. Preparation connotes a singular purpose, whereas the idea that an experience should inform later experiences is a by-product of meaningful engagement. Thus, Dewey (1938/1997) declares that

> the idea of using the present simply to get ready for the future contradicts itself…We always live at the time we live and not some other time, and only by extracting at each present time the full meaning of each present experience are we prepared for doing the same thing in the future. This is the only preparation which in the long run amounts to anything. (p. 49)

The key word here is "simply." Although as educators we must consider our impact on our students' futures and consider our role in skill building and the extent to which we deepen our students' understanding of a particular subject, this cannot be our sole intent. The present is meaningful unto itself, and part of our efforts must be focused on the quality of experience on its own. As Csikszentmihalyi suggests, experience must not only stimulate the mind, but must touch our hearts.

In college, I took an especially experience-based art history class. It was an East Asian art course, and our final assignment was to use the readings we had done on Buddhism, Shintoism, and Zen to construct our own Zen rock garden. This activity was not intended to prepare me for a career in rock garden design, but

rather to make my own learning in the class as meaningful and personal as possible. And yet, in constructing my garden, I internalized the physical and conceptual attributes of a Zen garden in a personal and creative way that did, in the end, directly inform a future experience.

In the summer of 2010, I led a studio arts camp for 20 four- and five-year-olds. Our second trip was to the Brooklyn Botanic Gardens, where I now work as a discovery garden instructor, where we sketched and meditated in the Japanese garden. Then, in an impromptu burst of inspiration while we waited for a delayed bus, we made a Zen rock garden with our bodies. The children chose a rock shape and placement, positioned their body accordingly, and then imagined that they were rocks and then mountains. The next day, we made our own miniature rock gardens, intended as a tool for meditation, or “emptying our brains,” and I feel that the children got more out of this than any other project we did. Not only was it hands-on, but it also stemmed from a series of related and intrinsically meaningful experiences that built on one another, both for the students and for myself as a student of education.

Part of what made these experiences so powerful was that they occurred in a community of learners. Dewey (1938/1997) was one of the first to underscore the social nature of learning while also noting the hard work needed to foster a progressive learning community. Vygotsky showed us the importance of peer interaction. Later, Bruner (1986), in his exploration of language and education, likewise recognized that learning in most settings is a communal activity, a sharing of culture. It is not just that the child must make his knowledge his own, but that he must make it his own in a community of those who share his sense of belonging to a culture. (p. 127)

Bruner (1986) also highlights “the importance of negotiating and sharing—in a word, of joint culture creating as an object of schooling and as an appropriate step en route to becoming a member of the adult society in which one lives out one’s life” (p. 127). This statement derives from his view that we are constantly reconstructing and renegotiating our reality and culture. As he puts it, “a culture is as much a forum for negotiating and renegotiating meaning and for explicating action as it is a set of rules or specifications for action” (Bruner, 1986, p. 123). And since culture is constantly being recreated, and learning is at once a cultural and

social experience as well as an “inventive” process, he argues that “education, if it is to prepare the young for life as lived, should also partake of the spirit of a forum, of negotiation, of the recreation of meaning” (Bruner, 1986, p. 123). He suggests that education can do so through deliberate and open-ended language. He cites an example of a teacher of his own who used language to include students in the negotiation of meaning and to “extend [their] worlds of wonder” (Bruner, 1986, p. 126) rather than just feeding them facts, figures, and foregone conclusions.

When students make meaning for themselves by creating and reflecting and solving problems and relishing their roles as learners, then there is a sense that all is not predetermined. Thus, openness and possibility are the underlying characteristics of constructivist learning. Without a little breathing room, without that essential “freedom that moves us” (Freire, 1998, p. 102) to explore and an awareness of possibilities, learners are disempowered and have no reason to struggle with the construction of their own meaning. To allow for possibility is to deny absolutes, to refuse to “live history as determinism,” (Freire, 1998, p. 103) and to turn one’s back “on any idea of an all-encompassing machine which describes nature and instead look towards all those wonderful, individual living beings—the learners—each of which creates his or her own model to explain nature” (Hein, 1991, “Constructivism,” para. 6).

Thus, according to Freire (1998), the progressive teacher’s role is to help “students to recognize themselves as the architects of their own cognition process” (p. 112). Greene (2001) later echoes this thought when she argues that “meanings must be achieved by those with a sense of agency; they do not preexist” (p. 124). Not only must students be the ones piecing together and organizing meaning, but they must also be aware of themselves as agents, as empowered and active learners. According to Freire (1998), to facilitate this sense of agency, the teacher must affirm and “instigate the student’s inherent curiosity, instead of softening or domesticating it” (p. 111). In other words, the teacher must listen to and encourage students’ curiosity instead of suppressing it in the interest of pacing, testing, planning, or classroom control. In true student-driven settings, where students make their own meaning, it is their curiosity that guides the learning. I have found the freedom to do this as an outdoor educator. The instinctual fascination children have for the natural world coupled with my not having to conform to the

demands of the school allowed me to truly let student curiosity structure our activities. So, for instance, when I worked at an outdoor education center in the Berkshires, we could and would spend an entire day exploring the stream and surrounding ecosystems if the students remained interested and engaged in a “process of discovery” (Freire, 1998, p. 105).

In my experience, often what passes for discovery-based learning in the classroom only somewhat resembles the process of discovery because all the “discoveries” are meticulously predetermined. In order for this process to actually be experienced as discovery, teachers and students must possess a sense of freedom and alternatives. There must be space and time for teachers and students alike to wonder, for teachers to say, “I don’t know,” and for many different right answers.

What Freire conceives as freedom, Greene (2001) conceives as possibility, writing “we are concerned with possibility, with opening windows on alternative realities” (p. 44) and (quoting Tennyson’s Ulysses) noting “how dull it is to pause, to make an end” (p. 46). Recalling Freire’s (1998) reflections on the process of discovery, Greene (2001) conceives of learning as ideally “stimulated by the desire to explore, to find out, to go in search” (p. 47). She argues that “this is the learning that goes beyond teaching—the only significant learning...It is self initiated at one point, permeated by wonder, studded by moments of questioning, always with a sense that there is something out there, something worthwhile beyond” (Greene, 2001, p. 47).

Without this sense of “something worthwhile beyond,” constructing meaning is virtually impossible and pointless. It is only with this sense of possibility and freedom that we learn not only about art or the world around us but also about ourselves. This is so important to Greene that she quotes the same words from The Hermeneutics of Postmodernity by G. B. Madison several times in her reflections:

> “It is through imagination,” writes G. B. Madison, “the realm of pure possibility that we freely make ourselves to be who or what we are, while in the process preserving the freedom and possibility to be yet otherwise than that we have become and merely are.” (1988, p. 191) (Greene, 2001, p. 118)

Greene (2001) sees the arts in particular as a refuge of the imagination with the unique ability to empower students to “become creatively what they are” (p. 118) and to counter the “dread” (p. 119) of education based around the transmission of “dead and incomplete” facts (p. 126). It is through connecting with art that Greene believes we can avoid what Freire (1998) calls “the bureaucratizing of the mind” (p. 102), which he describes as “a state of refined estrangement, of the mind’s abdication of its own essential self” and of “a ‘mass production’ of the individual and of conformity in the face of situations considered to be irreversible because of destiny” (Friere, 1998, p. 102). As someone who was not a “science person” until recently, I can relate to the intimidation and dread that accompanies learning that is so tied up in facts and formulas that it precludes wonder and discovery. For me as a middle and high school student, science represented the absence of possibility. In English and history classes, I felt free to make connections and come up with theories, but in science class, I was a passive receiver of knowledge. I now realize that this has more to do with the way in which I was taught than with science. As an adult, some of my most meaningful learning experiences have been in the realm of science, in exploratory settings where I felt empowered to make the natural world my own. Not only that, but my favorite subject to teach is science, because it now seems replete with possibility.

Freire’s “bureaucratization of the mind” has many roots. Both Freire and Greene note the impact of testing and its associated pressure on learning and teaching, as well as the powerlessness of teachers in the face of universal top-down standards and curriculum. According to Greene (2001)

> When we are compelled or lured to remain passive receivers of discrete parts of a curriculum, say obliged to speak in a manner others determine and to follow some extrinsic logic, we become disempowered. We are no longer able to address students as diverse persons in quest of themselves, as who they really are. (p. 126)

Not only do students need to be empowered in order to construct meaning out of their lives, but teachers must also be empowered to help students do so. Perhaps it is the perception of this powerlessness of classroom teachers and the associated distaste for facts—those dull pauses and ends that Tennyson dispar-

aged—that leads Greene (2001) to restrict her “aesthetic moments” (p. 12) to interactions with the fine arts. When empowered, however, students and teachers can build meaning and form connections in almost any setting.

We have seen throughout this book how Burnham similarly sees the museum as a refuge of sorts, as “places of a possibility” with the potential “to inspire and encourage people to dream a little with them” (Burnham & Kai-Kee, 2005, p. 75). Unlike those who see information as paramount, Burnham believes that the educator’s knowledge of an artwork “enables her to suggest possibilities, not to establish conclusive interpretations that she will impose on her students” (Burnham & Kai-Kee, 2005, p. 71). Through these suggestions, the educator may provide visitors with information. “The skillful use of information,” Burnham continues, “makes the students aware of ambiguities…[which ultimately]… enriches their experience” (Burnham & Kai-Kee, 2005, p. 72). There is a limit to how much students can construct their own meaning in the absence of information. It is in using information to make students aware of possibilities and ambiguities that the sharing of information becomes an important component of constructivist learning.

These possibilities and ambiguities are also what transform hands-on activities into meaningful experiences for the heart and mind. Without possibility, there is no room for wonder or the joy of a personal connection. Moreover, in allowing for both possibility and ambiguity, Burnham trusted us to come to our own reasonable interpretations of the work at hand, just as she trusted us with silence. It is this trust that underlies every situation in which learners construct their own meanings, whether in an aesthetic moment in response to a piece of art, in a museum setting, or in the classroom while learning about states of matter.

Permitting learners to construct their own understanding of reality requires “faith that our learners will indeed construct meaning which we will find acceptable” (Hein, 1991, “Constructivism,” para. 7). The reader has seen how on several occasions, Burnham trusted us to offer pertinent and appropriate comments. Likewise, when teachers in museums and in the classroom have faith in their students’ ability to construct knowledge, then tolerance of others is fostered, and knowledge is reached through diverse means.

I have been fortunate to be trusted as a student. My favorite professor and advisor at Wesleyan, Vera Schwarcz, a brilliant scholar of Chinese history and language, was perhaps the great formal educator in my life. One concept that I found particularly appealing in my study of Chinese history and culture is xin, which means heart-mind in Chinese and signifies a unity of mind, emotion, and body that has far-reaching implications in Chinese medicine and philosophy. I realized that I loved this professor's classes because we learned together with our xin, responding to each other's narratives and ideas in a fluid and personal way. In class we asked questions and made connections to our own stories, so that the history of China became a way to make deeper and more personal meaning. I was able to write a poem about the Cultural Revolution for one assignment and write my final essay on the intersections between traditional Chinese medicine and my own experience with illness. She trusted me to learn through my own unique, meandering path. Meaningful learning is personal and highly differentiated, and learners must be trusted enough to learn in their own way, whether through creative processes like poetry, explorations of a personal experience, questioning, or partnering with others. So too, for our reading responses, Schwarcz encouraged us to draw on personal experience, trusting that we would still read closely and with a critical eye. That we were invited to simply respond demonstrated sufficient trust, and it is rare that we allow children the freedom to simply respond, without asking them leading questions buried in information or instructions.

As a teacher, I strive to impart this sense of being trusted to my students through an openness to their xin—to the complex web of emotions, queries, and imaginings that makes up the self. Admittedly, it is easier outside of class, when I'm in a natural setting and can allow the students to search for things that they find intriguing until we organically come to some sort of focus. No matter where I am, as much as is feasible, when a child asks me a question, I respond by asking, "What do you think?" So often, students ask questions for reinforcement of their own ideas, or at least of their own inklings of ideas. In responding this way, I hope to communicate that I trust them to construct their own meaning and still come to an "acceptable" conclusion.

Institutionally, museums may choose to foster an atmosphere of trust through exhibit design, inquiry-based programming, or designated areas for messier, ex-

ploratory learning. Places such as the Discovery Room at the American Museum of Natural History and the Discovery Garden at the Brooklyn Botanic Gardens, in which students are encouraged to touch and smell and even garden in a setting specifically designed for children, communicates that the garden trusts and welcomes visitors to engage with and even care for the living displays.

Trust, however, requires courage, and many educators do not trust their students to independently or as a community come to understandings that the educators would find appropriate. Over the first few weeks of the school year, classroom teachers often drill the students on teacher created rules and routines. In their own words, “they don’t want chaos,” and perhaps believe deep down that by giving their students agency, they will find themselves mired deep within extreme disorder.

No one wants chaos. Trust, however, does not necessitate an abdication of responsibility for the learner’s safety or learning experiences. Rather, it entails a process of shared negotiation and an environment that encourages (en-courage, with the emphasis on the courage) students to have confidence in their own inklings and imaginations. Based on my own experiences, I am inclined to believe that the more trust I convey to my students, the more they will live up to and exceed my expectations. Even so, it takes courage to abandon one’s “fear of speculation” (Greene, 2001, p. 126), and trust one’s students to construct meanings that correspond to one’s own goals and values as an educator. For many people, it requires extra courage to trust young children, who for some appear too wiggly and impulsive to safely construct meaning with their own hearts and minds. Perhaps this is why young children are frequently discouraged and sometimes even barred from certain museums, due to a Gilmanesque belief that children cannot comprehend the value, fragility, or meaning of art objects and consequently cannot be trusted to learn from them appropriately. However, in a relationship founded upon trust, there is always an opportunity to revisit, to communicate one’s intentions honestly, and to listen anew so that in time, students and teachers should be able come to mutual understandings of reality, and most children should and can exceed such limited expectations.

It is perhaps with this courage and participation in the construction of the meaning in mind that Freire speaks of the educator’s capacity for struggle and that

Burnham speaks of the “educator’s openness to change” (Burnham & Kai-Kee, 2005, p. 73), another quality that requires considerable courage on the part of educators. We ask our students and visitors to expand and revise their thinking often based on as little as our word. We have stressed throughout this book that it seems to us only fair that educators in turn have the humility and flexibility to welcome the possibility of change in their own thinking and to trust students enough to listen to what they communicate.

To be a progressive educator, according to Freire (1998), one must possess “a generous loving heart, respect for others, tolerance, humility, a joyful disposition, love of life, openness to what is new, a disposition to welcome change, perseverance in the struggle, a refusal of determinism, a spirit of hope, and openness to justice” (p. 110). There are many characteristics one might add to this list, including empathy, creativity, and joy in process. Trust, however, underlies the educator’s ability to share these qualities with learners, fully and without reservations. We have noted how both Greene and Burnham see museums as places of alternatives, where students are free to speculate and dream without reprisal. Perhaps, however, it is not the setting that provides the alternative, but the feeling that pervades it. Is it a place where learners are trusted to formulate their own ideas, or is it a place where learners are excluded from the process of making meaning because of our need to control, a fear of the unpredictable, and a belief in the primacy of information? In this book, we have argued that both museums and schools must contend with these questions. In museums and in classrooms, it is trust that is the key—the trust that visitors and learners may approach a subject in different ways, that if prepared adequately, children will not uproot roses or charge at fragile antiques, and that learners will be able to handle more open-ended thinking, and perhaps even discover something new.

In any setting, learning is fundamentally more a process of opening, extending, discovering, and wondering than of consuming. It is a process of building layers upon layers of connections, never in isolation, but always with others, whether with a docent, a grandmother, other students, or a teacher. Education, as defined by all of these thinkers, is fundamentally enlarging and interactive. It must be inclusive, purposeful, experience based, and respectful of children and how they negotiate their world.

As museums enter a new century, education has become adopted as a centerpiece of many museum mission statements. We feel museums are strongest when they incorporate the insights of educational theorists to provide a refuge, a place for exploration and discovery that unifies heart and mind and brings people and communities together. We hope that the reader of this book has found, through the theorists whom we have explored together, that a museum may be much more than a collection of archaic things, and that, in the words of Dewey (1938/1997), “education may be a reality and not a name or slogan” (p. 91).

References

Bruner, J. (1986). Actual minds, possible worlds. Cambridge, MA: Harvard University Press.

Burnham, R., & Kai-Kee, E. (2005). The art of teaching in the museum. Journal of Aesthetic Education, 39(1), 65–76.

Dewey, J. (1997). Experience and education. New York, NY: Touchstone. (Original work published 1938)

Freire, P. (1998). Pedagogy of freedom: Ethics, democracy, and civic courage. Lanham, MD: Rowman & Littlefield.

Greene, M. (2001). Variations on a blue guitar: The Lincoln Center Institute lectures on aesthetic education. New York, NY: Teachers College Press.

Hein, G. (1991). The significance of constructivism for museum education. In A. Zemer (Ed.), The museum and the needs of the people. Retrieved from http://www.exploratorium.edu/ifi/resources/constructivistlearning.html

8

MAXINE GREENE: AESTHETIC EDUCATION

BY LAUREN APPEL

"I am reminded of how the winter trees and the ice-blocked river withdraw and become invisible until I take the time to attend, to notice, to release myself from the routine. And I think of how various and summering and multi-faceted the envisaged world becomes in those few moments when I consciously attend."

Laurin Appel

Maxine Greene is a prolific philosopher, author, educator, and activist. Her writings, lectures, and speeches cover a range of topics related to education and aesthetic encounters in education. Greene draws attention to society's inequities and the role of the arts in providing opportunities for students to gain a sense of empowerment that combats those inequities. This perspective is essential for educators in museums; as educators often working with school-based populations in non-school-based settings, we are uniquely positioned to offer empowering alternatives to more traditional educational systems. For over 30 years, Greene has been philosopher-in-residence at Lincoln Center Institute (LCI), which produces performances and learning experiences that develop skills of imagination, creativity, and innovation through education and the arts.

In Greene's (1984) article, "The Art of Being Present: Educating for Aesthetic Encounters," she addresses a number of points central to her philosophies on arts and education. She emphasizes both the importance of students having live, in-person encounters with works of art and the role of teachers in facilitating those experiences. She writes about the importance of connecting students to multiple art forms, or what she calls "several arts" (Greene, 1984, p. 124), rather than to just one discipline. This commitment to "several arts" is demonstrated in her own writing; she often makes references to more than one art form in a single paragraph—sometimes in a single sentence—as she illustrates a particular point. In "The Art of Being Present," Greene expounds on the seemingly timeless challenge of validating the role of arts in education. She underscores the ability of the arts to empower students as they become active participants in their own lives and their own education as well as in society at large. She is interested in experiences that open one up to unexpected outcomes and promote a shift from the role of passive observance to that of active participation. A discussion of Greene's salient points would not be complete without mentioning her acknowledgement that the arts reach their highest potential of significance and meaning in one's life when they connect to personal experiences. She reminds us that students' personal experiences are an important entry point for engaging students in their own learning.

So where, within today's educational system, do we find the opportunities Greene (1984) alludes to that "make one see and hear and feel in such a fashion that one's questions sharpen, one's head aches" (p. 132)? Museums are one place where we can offer such opportunities. While Greene's focus is specific to the arts, empowerment through active engagement could be extended to other disciplines and settings, including museums of science, history, or industry. She supports this idea when she suggests that "a deliberate effort to empower individuals to notice what there is to be noticed and to become familiar with the range of 'languages' or symbol systems involved, can become an effort that moves people to the taking of initiatives" (Greene, 1984, p. 124).

However, Greene (1984) also cautions that the openness and potential ambiguities of the arts—"what Virginia Woolf called a 'shock of awareness' that shakes conventional certainties as it opens the way for something new" (p. 132)—may cause discomfort for educators and policy makers and contribute to efforts to trivialize the role of the arts in schools. Greene's own work, and LCI's, provides ways to promote arts experiences for students in a manner that may assuage the potential discomfort that Woolf's "shock of awareness" may cause. In addition, and in concert with its work with children in schools throughout New York City, LCI leads workshops for teachers and students in teacher-training programs and sends its teaching artists and workshop facilitators to museums and other cultural institutions throughout the city. By both providing in-depth professional development for classroom teachers and making teachers an integral a part of the workshop process, LCI gives teachers a firsthand experience, rather than putting them in the role of an observer, while a teaching artist leads a class. As Greene (1984) states, "There is no such phenomenon as a second-hand experience with a Cezanne landscape or a Stevens poem or a Woody Allen film. We can never send someone else to see it for us and come back and report. Not only are we required to be there; we are required to be there as active and conscious beings, allowing the energies of perceiving and imagining and feeling to move out to the works at hand, to bring them into life" (pp. 133–134). Likewise, classroom teachers can incorporate the firsthand experiences they gain at LCI into their daily classroom practice.

I had the opportunity to experience some of Greene's philosophies in practice at a dance performance at LCI. When I learned that one of my graduate school

courses would be attending that performance, I was excited. When I learned that we would be asked to participate in a dance workshop before the performance, my reluctance about dancing got the better of me. I was worried, anxious, and ultimately pleasantly surprised. You see, I do not like to dance. I regularly attend dance performances and with a background in theatre directing, I tend to be a discerning and generally engaged audience member. However, I avoid situations that might require me to dance socially or participate as a dancer. Thankfully, my reluctance to participate in a dance workshop at LCI quickly dissipated once the workshop began.

An LCI teaching artist facilitated a very positive and meaningful experience for us. During the workshop, we worked in small groups to create a short series of choreographed movements based on our own childhood memories, which we then fit together into one whole-group presentation. This provided a unique community-building experience for the class as we worked together, learned about each other's personal histories, and shared our own. As this shared experience brought us closer to our fellow classmates, it also brought us closer to the performers on stage later that evening as we watched them depict personal narratives through dance. We had common ground with the performers on stage after experiencing a similar process to theirs in developing our own movement sequences; our ability to assign narrative to our own movements helped us appreciate the narrative of the dance performance. Our experience in the workshop before the performance led to a very rich and participatory viewing experience. LCI prides itself on "developing skills of observation, imagination, and creativity through guided encounters with the visual and performing arts" (Lincoln Center for the Performing Arts, 2008, para. 9). Our own guided encounter did just that—it equipped us not only to be more engaged audience members but also to consider the roles of teamwork, creativity, and collaborative decision making in our work as educators.

Engaging an audience and helping them to make personal connections are only part of the empowerment of students Greene calls for. She provides examples of how the arts push the boundaries of reality, stating, "there are always horizons to be breached; there is always a 'beyond'—what is not yet" (Greene, 1984, p. 124). She asserts that arts provide opportunities for students to explore those boundaries and that people must be intentionally empowered to go beyond…basics in or-

der fully to perceive, to engage, to bring to life. If they are not, paintings and dance performances and enacted plays are likely to be absorbed by their surroundings, to become parts of the taken-for-granted reality. (Greene, 1984, p. 128)

To Greene, simply observing or noting a work of art, rather than connecting with a sense of alternative reality or something beyond, robs arts participants of the sense of empowerment that comes from interpreting their own lived worlds. The notion of empowerment and possibilities beyond our lived experiences extends into other realms of students' lives. Awakening a willingness to push boundaries is a key factor in promoting students' engagement in society. The alternative—disempowered students with a lack of wonderment—is a real concern in our education system, which provides fewer opportunities for open exploration as policies emphasizing testing proliferate in the schools.

Greene (1984) calls on us to transcend the boundaries, edges, and frames of works of art. As educators, we can take up this call and not only transcend the boundaries of art but also—by providing experiences that empower learners and bring objects to life in a vivid and personal way—help our students transcend the very boundaries placed on them by society and their life circumstances.

References

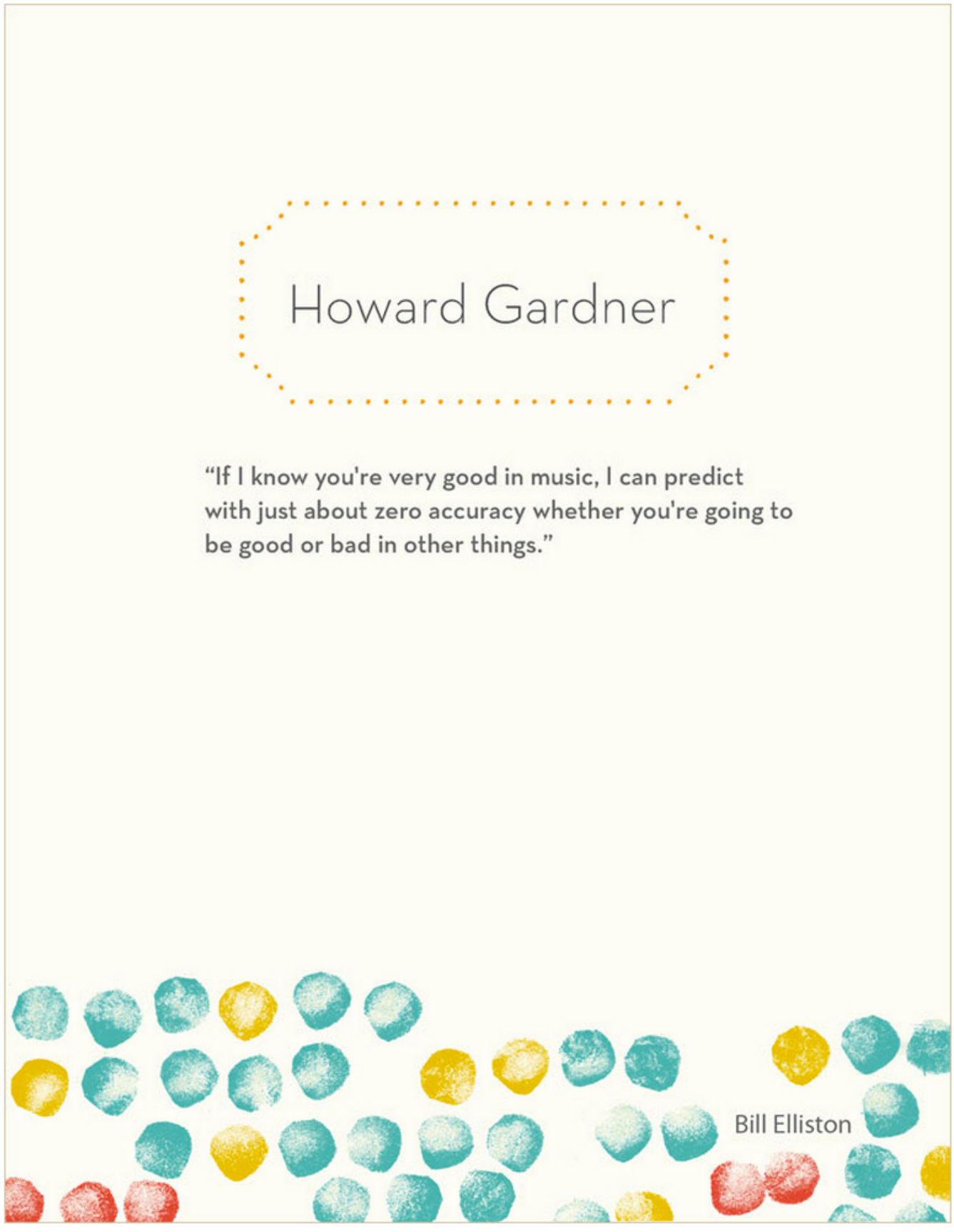
Greene, M. (1984). The art of being present: Educating for aesthetic encounters. Journal of Education, 166(2), 123–135.

Lincoln Center for the Performing Arts. (2008). Lincoln Center Institute for the Arts in Education announces Imagination Award 2008 recipients [Press release]. Retrieved from http://www.aboutlincolncenter.org/press-room/release/366?category_id=77

9

HOWARD GARDNER & MULTIPLE INTELLIGENCE THEORY: A PRACTICAL APPLICATION OF ENTRY POINTS IN MUSEUM PROGRAMMING

BY BILL ELLISTON



Throughout the 20th century, the paradigmatic understanding of an individual's intelligence held that a single, quantifiable aptitude, or general intelligence, underlies and governs all mental tasks. The popularity of this idea continued as researchers developed increasingly complex tests designed to reflect human intelligence as a single factor. In the 1970s psychologist Howard Gardner wondered why some individuals excelled in one area, such as mathematics, but not in another, such as music. "I was impressed by the fact that a strength, or a deficit, could cohabit comfortably with different profiles of abilities and disabilities across the variety of humankind" (Gardner, 2004, p. 3). Gardner was interested in the idea that a single metric could be responsible for such a variety of abilities in different subjects and disciplines. He increasingly began to suspect that there might be another way to describe intelligence. His work in developmental psychology and neuropsychology led him to conclude that the traditional monolithic view of intelligence was flawed. Gardner proposed that there are several discrete, inherent potentials that correlate to specific modes of interacting with, contributing to, and understanding the world. In 1983 Gardner published this idea as the multiple-intelligence theory. He went on to define each individual intelligence as "a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value to the culture" (Gardner, 1999, p. 33).

Gardner originally conceived of seven distinct intelligences but has since expanded his list. I summarize them briefly here; professions likely to correspond to the different intelligences are noted in parentheses:

- *Linguistic*: sensitivity to spoken and written language and the ability to use language to achieve specific goals (lawyers, writers, public speakers)

- *Logical-Mathematical*: capacity to analyze and solve logical and mathematical operations (mathematicians, statisticians, physical scientists)

• *Musical*: sensitivity to performance and composition and appreciation of musical patterns (musicians, composers)

• *Bodily-Kinesthetic*: aptitude in using one's physical body to solve problems and fashion products (dancers, athletes, surgeons, mechanics)

• *Spatial*: potential to recognize and manipulate patterns of physical space for specific goals (pilots, sculptors, surgeons)

• *Interpersonal*: capacity to understand the intentions, motivations, and desires of others and to work effectively with others (teachers, salespeople, religious and political leaders)

• *Intrapersonal*: capacity to understand oneself and have effective working models of one's desires and fears; ability to effectively regulate one's own life (philosophers, lawyers, writers)

• *Naturalist*: disposition to recognize and classify patterns of living organisms, interact with organisms, and categorize items in the environment (farmers, breeders, natural scientists)

Gardner suggests that individuals are naturally stronger in some of these intelligences than in others. These strengths and weaknesses combine into a unique set of inherent capacities, or an intelligence profile. For educators, multiple-intelligence theory is important because it changed the understanding of how teachers might reach students. Many teachers now base the ways they engage different students on a variety of intelligence profiles, taking advantage of the various strengths of their students.

Museums, zoos, and similar institutions have an inherent capacity to use multiple-intelligence theory. For example, the Franklin Institute Science Museum in Philadelphia has featured a giant, walk-through heart since 1954. It allows visitors to relate to physical features on a large scale, thus employing an aptitude for recognizing patterns in physical spaces to comprehend anatomical form and function. This model uses spatial and bodily-kinesthetic intelligence, rather than relying on a student's ability to read about anatomy in a textbook.

Museums have even designed exhibits around multiple-intelligence theory, with components focusing on specific intelligences. The Explorama in Denmark has such an exhibit. One component is a game that highlights the interpersonal intelligence. Two players attempt to move a ball by relaxing. As the players relax, alpha waves in the brain are picked up by sensors and move the ball away from the more relaxed player. "This task requires self-control, and thus taps into intrapersonal intelligence. However, the players must also employ interpersonal intelligence, paying attention to each other and trying to produce more alpha waves than the opponent does" (Moran, Kornhaber, & Gardner, 2006, p. 5).

One of the guiding principles of using multiple-intelligence theory for education is what Gardner (1999) calls "individually configured education" (p. 153). All students can benefit from understanding history, for example, but they will respond to different modes of presentation and interaction, drawing on several intelligences to form a comprehensive grasp of a topic. By understanding each student's intelligence profile, teachers can craft lessons that will be accessible to the entire class.

While this is excellent advice for classroom teachers, thoughtful, individually configured education is not exactly practical for museum educators, who often see a student only once or twice. Without the ability to get to know our students at length, museum educators may not be able to easily direct successful modes of learning at specific individuals. However, this doesn't mean we should fall back on traditional and uniform presentation methods. "Seven kinds of intelligence would allow seven ways to teach . . . to introduce a particular concept (or a whole system of thinking) in a way that children are most likely to learn it and least likely to distort it" (Gardner, 1993, xix). Although we cannot expect to know all our

students deeply, museum curricula can incorporate different components that engage at least a few intelligences into lessons and exhibitions.

While crafting exhibits and curricula to engage multiple intelligences suggests we may connect more deeply with a greater number of students or museum visitors, there is a twist. Although teachers and educational theorists have enthusiastically embraced multiple-intelligence theory, it is not an educational theory. It is a scientific model for understanding human intelligence. It is important for educators to understand the underlying science if they are using Gardner's ideas to inform or support pedagogical choices.

Educators should be aware that neuroscience has found considerably less evidence than we might like for this 30-year-old theory. Some claim that the unwavering support from educators has imbued multiple intelligences with unwarranted validity, given recent neuroscience research (Howard-Jones, 2009, p. 28). In fact, numerous scientists find insufficient evidence for multiple-intelligence theory. Gardner (2003) himself has stated, "In light of the findings of the last two decades, the biological basis of MI theory needs urgently to be brought up to date" (p. 12). One article states that although recent findings are "consistent with Gardner's suggestion of several coherent domains of ability, they are also consistent with the hierarchical models of intelligence," (Visser, Ashton, & Vernon, 2006, p. 500) which rely on a single general intelligence quotient.

There is some support for multiple-intelligence theory from the scientific community. Several neuroimaging studies provide evidence of the activation of specific anatomical networks for tasks specifically associated with a number of Gardner's intelligences, including linguistic, mathematical, visual-spatial, and the two personal intelligences (Posner, 2004; Atherton, 2005). Gardner has also always been open to modifications to his theory. He continues to state that there is no definitive list of intelligences. As neuroscience evolves, studies may reveal a greater or lesser number of intelligences.

Though Gardner's multiple-intelligence theory helps describe cognitive ability, it is notably not an educational theory or approach. However, work around multiple-intelligence theory has helped to provide a foundation for a corresponding

educational model that Gardner (1999) calls “entry points.” The entry-points framework acknowledges that different learners prefer some avenues of discovery over others. We know people respond differently to spoken lectures than to kinesthetic games. Some people look forward to artistic expression while others enjoy logical reasoning. Each avenue offers a slightly different perspective into a topic by capturing the imagination of students with different abilities and interests. The six main entry points, as outlined by Gardner (1999), are described below.

• *Narrative*: Most topics have a story or narrative thread that can be related to a central theme. It could be presented through a descriptive reading, song, dramatic performance, or folk tale.

• *Logical-Quantitative*: By using deductive reasoning, logical discussions, and measurable and numeric aspects of a topic, this entry point can engage learners who enjoy logical and mathematical analysis. Measurements, inferences, and conclusions can also be used.

• *Aesthetic*: This entry point highlights artistic aspects of a topic through making and observing works of cultural or artistic interest. It may use painting, crafting, and various other sense-oriented techniques.

• *Experiential*: This is the kinesthetic, spatial, “hands-on” entry point; through it, physical experiences related to a topic of interest are made available to learners.

• *Interpersonal*: This entry point involves working with others to learn about a topic of interest. Partner and small-group projects could be used for this. This entry point also allows students to engage in Vygotsky’s “zone of proximal development” when working together.

- *Existential/Foundational*: By allowing learners to engage in the fundamental questions relating to a topic, they can investigate some of its deeper, philosophical issues.

One institution that has designed curriculum with Gardner's multiple-intelligence theory in mind and has successfully incorporated entry points into its curriculum is the Prospect Park Zoo. Its program In Living Color uses a variety of activities to teach concepts of animal coloration to children ages three through six. This two-part class begins with an educator-led introduction to concepts of camouflage and color adaptations for attracting and warning. A puppet show follows with three characters, each using a short narrative to illustrate a coloration pattern. At the end, students join the puppets in a catchy song. The lyrics of the song correspond to physical movements that reinforce the specific examples of animal coloration.

The second part of the curriculum begins with a review of knowledge from the first session and then, using live animals, introduces students to real-life examples of coloration concepts. Each animal introduced displays one of the three coloration adaptations. After investigating the animals, the class plays a camouflage game. Students wear colored tunics and must position themselves on matching colored mats when music stops playing; if they stand on a non-matching color, the instructor, dressed like a predator, will "eat them." Students are then encouraged to make peacock headbands using bright, attracting colors. Finally, the group reconvenes to review coloration concepts by observing pictures of different animals in their native habitats. They discuss which coloration concept each animal displays and what would happen to the animals if they were in a different environment or if they expressed some other coloration.

The activities in this curriculum are designed with consideration of multiple intelligences, but more importantly, they provide entry points to a myriad of learners. To engage the narrative entry point, the zoo uses puppets to tell the story of the three coloration adaptations. To encourage logical thought, in discussion with the students both the instructor and the puppets draw inferences

about some aspects of coloration. For example, the instructor may ask a series of questions centered on what would happen if the parrot displayed camouflaging colors instead of attracting colors. The zoo addresses the aesthetic entry point by providing a time to make headbands. Each student is encouraged to express artistically a concept of animal coloration and to describe his or her choices. By including interaction with live animals and the camouflage game, which allows students to physically explore the concept, the zoo encourages kinesthetic and experiential learning. In Living Color does not specifically address interpersonal learning, although cooperative children in the camouflage game may assist one another and children may help one another when identifying different coloration patterns throughout the program. Questions such as “What might happen to a turtle if it weren’t camouflaged?” or “Could the parrot find his mate if he were camouflaged?” can be explored with students to reveal the foundational underpinnings of animal coloration.

Ultimately, the accuracy of multiple-intelligence theory as a scientific model may be less important than the success educators have achieved by using entry points and curricula based on multiple-intelligence theory. A three-and-a-half-year study consisting of 41 schools designing curricula based on multiple-intelligence theory found that 78% of the schools reported a significant increase in student test scores. Educators from 20 of the schools attributed the increase in scores specifically to the application of multiple-intelligence theory to curriculum design in classrooms (Kornhaber, Fierros, & Veenema, 2004, p. 13). Success using entry points as a model for instruction is also consistent with the observations many have made in classrooms, exhibit halls, and outdoor grounds. As Korhhaber (2001) notes, “students think and learn in many different ways. It also provides educators with a conceptual framework for organizing and reflecting on curriculum, assessment and pedagogical practices. In turn, this reflection has led many educators to develop new approaches that might better meet the needs of the range of learners” (p. 276). Curriculum development based on the idea that there are several avenues through which students can engage a topic seems to allow learners to develop a more nuanced understanding. Museum educators can use the same principles to design exhibits and programs to interest visitors of all intelligence profiles.

Reference

Atherton, M. (2005, April). Applying the neurosciences to educational research: Can cognitive neuroscience bridge the gap? Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada. Retrieved from www.tc.umn.edu/~athe0007/papers/EducationandNeuroscience.pdf

Gardner, H. (1993). Frames of mind: The theory of multiple intelligences. New York, NY: Basic Books.

Gardner, H. (1999). Intelligence reframed: Multiple intelligences for the twenty-first century. New York, NY: Basic Books.

Gardner, H. (2003, April). Multiple intelligences after twenty years. Paper presented at the meeting of the American Educational Research Association, Chicago, IL. Retrieved from http://ocw.metu.edu.tr/pluginfile.php/9274/mod_resource/content/1/Gardner_multiple_intelligent.pdf

Gardner, H. (2004). A multiplicity of intelligences: In tribute to Professor Luigi Vignolo. Retrieved from http://llk.media.mit.edu/courses/readings/gardner-multiple-intelligences.pdf

Howard-Jones, P. A. (2009). Neuroscience, learning, and technology (14–19) (Report for Becta 14–19 Deep Learning Project). Retrieved from http://www.bris.ac.uk/education/people/academicStaff/edpahj/publications/becta.pdf

Kornhaber, M. L. (2001). Howard Gardner. In J. A. Palmer (Ed.), Fifty modern thinkers on education: From Piaget to the present (pp. 272–279). London, England: Routledge.

Kornhaber, M. L., Fierros, E., & Veenema, S. (2004). Multiple intelligences: Best ideas from research and practice. Boston, MA: Pearson Press.

Moran, S., Kornhaber, M., & Gardner, H. (2006). Orchestrating multiple intelligences. Educational Leadership, 64(1), 22–27.

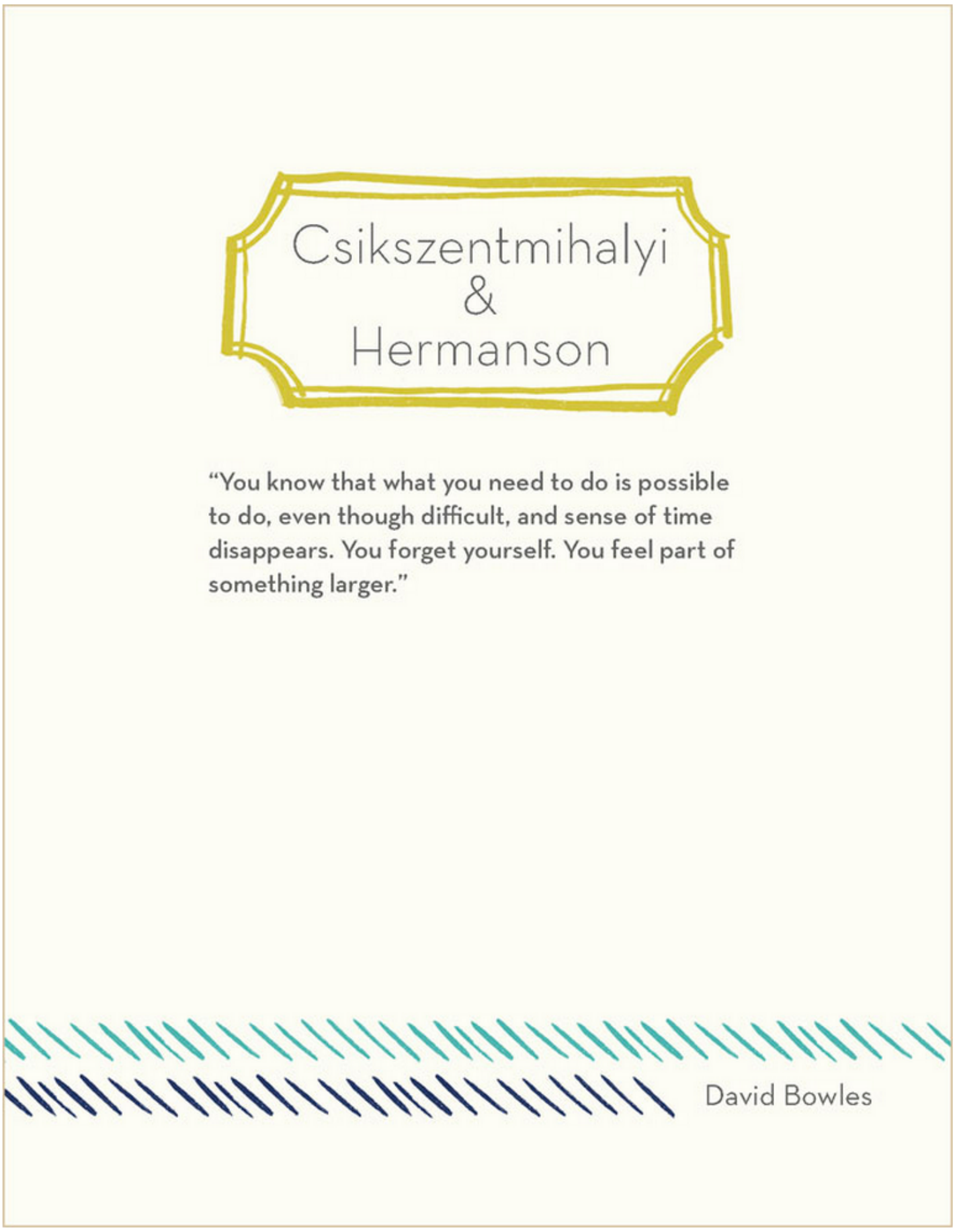
Posner, M. I. (2004). Neural systems and individual differences. Teachers College Record, 106(1), 24–30.

Visser, B. A., Ashton, M. C., & Vernon, P. A. (2006). Beyond g: Putting multiple intelligences theory to the test. Intelligence, 34(5), 487–502.

10

CSIKSZENTMIHALYI AND HERMANSON: FINDING THE FLOW

BY DAVID BOWLES



“Mr. Bowles, I’m Hindu, and that is not Ganesha’s story.” Nishita’s second-grade class was studying world cultures and had come to the Rubin Museum of Art, where I work in K-12 school programs, in order to explore the art and cultures of the Himalayas. We had spent the morning investigating statues of Hindu deities, hearing their stories, and discussing the relationship between images and narratives. At a large sandstone statue of Ganesha, the elephant-headed remover of obstacles, I finished telling my version of the story of how this fascinating deity had received his unique head. Nishita’s hand shot up, and she made that declaration loud and clear. I asked her to tell us her version, which she did with great gusto. Indeed, her version was different in many ways, but there were still a few similar narrative kernels.

When she was done, I asked the class why they thought Nishita and I had such different versions of the story. Puzzled but intrigued responses slowly began to come forward from the students, each building on earlier suggestions, and sometimes referring to other Hindu works of art we had explored earlier. By the time we dispersed to sketch independently in the galleries, the students were positively abuzz with theories. Nishita didn’t sketch at all; she continued to discuss the issue with several different students. When we came back together 10 minutes later, several students proposed their new theories. Nishita hit the nail on the head when she argued, “Maybe, because these old stories were told from person to person for so long, they changed. It’s like when you play a game of telephone. The sentence changes by the time it gets to the end.” Nishita and her classmates had developed a sensible theory about the transmission of oral histories on their own. I think they accomplished this because they had entered into a kind of flow state, motivated not by anything I had offered them, but by their own desire to learn.

Csikszentmihalyi’s theory of the flow experience is important to us as museum educators because of its emphasis on intrinsic motivation, curiosity, and individual autonomy. These aspects of learning play major roles in shaping the visitor experience in museums and other spaces of non-school-based learning, although one might argue that they surely enhance learning experiences in schools and universities as well.

Csikszentmihalyi argues that human actions are sparked by a blend of intrinsic motivation (action for its own sake) and extrinsic motivation (action as a means to achieve reward or avoid punishment). He cites an array of studies over the past 50 years that demonstrate that intrinsically motivated learners tend to exhibit increased creativity, perform better academically, and pursue their talents and interests further as time goes by (Csikszentmihalyi & Hermanson, 1995). Even more importantly, he believes that well-planned activities that encourage intrinsic motivation can lead participants to what he identifies as a “flow experience”—an almost automatic state of mind marked by extended focus, heightened interest, and positive intellectual and emotional change. Activities that lead to this flow state must have clear goals and understandable rules and usually generate instantaneous and unambiguous feedback for participants. A good example of this might be the experience of working on a project and getting lost in it, becoming so engrossed that you work tirelessly to solve problems that arise, until you look up hours later, and it hardly seems like any time has gone by at all.

Csikszentmihalyi’s pedagogy of flow draws from many of the ideas of theorists like Dewey, Vygotsky, and Gardner. The nature of this deep connection between lived experience and learning is at the heart of museum education. In my experience, learners tend to have richer, more complex, and more meaningful learning experiences in museums when they are motivated by their own desire to participate, without the promise of extrinsic reward or punishment. As you might imagine, I am not the greatest fan of trip sheets. All too often (but certainly not always) they act as barriers between learners and museum objects rather than as bridges, generating the need to fill in the blanks rather than to explore, investigate, and reflect upon new ideas. I am similarly disinterested in disciplining students by threatening to withhold—or even actually withholding—museum trips or other special learning opportunities from them. How then do we inspire intrinsically motivated learners?

Intrinsically motivated experiences are marked by several characteristics. For one thing, they spark curiosity in their participants. People are willing to devote mental energy and time to such tasks because they make the participants inquisitive; that is, they inspire people to generate questions. The act of asking questions is very different from answering questions—it requires a degree of curiosity. Activities that stir up questions are far more likely to maintain participants’ interest

and therefore lead to further questions that effect positive intellectual and emotional change. For example, a learner who is given the opportunity to wonder about the purpose of an unfamiliar object is often willing to devote a fair amount of time to its study, as opposed to a learner who is presented with a list of factual information about that object. This readiness to spend time discovering is fundamentally linked to inquisitiveness and central to constructive museum education practice.

In fact, this level of sustained interest is another aspect of intrinsically motivated activities. Csikszentmihalyi and Hermanson (1995) argue that “interests are partly universal, partly the result of individual experiences and one’s idiosyncratic personal history” (p. 69), and go on to point out that there are two types of interest, situational and individual. Situational interest is short term, and often sparked by a hook—a novel display or attractive conversation starter. On the other hand, individual interest is long term, enduring, and often elusive. Flow experiences for museum visitors can stem from either form of interest, but in my experience the most effective ones are usually marked by a sensitive balance between the two and a clear openness to individual interests on the part of the museum educator. For example, a learner who is encouraged to take on the pose of a statue so that she can pursue her obvious interest in moving around tends to be more likely to focus on the museum experience at hand than if she is told to sit quietly and listen.

So what strategies can we use to help museum visitors achieve their own flow experiences? By designing activities, investigations, and spaces that encourage intrinsic motivation, museum educators offer visitors a chance to engage with works of art in meaningful ways. Furthermore, intrinsically motivated viewers of art are more likely to observe and follow up on the key details, broad patterns, and scintillating narratives that make visual art such an exciting medium of cultural discourse. One museum that takes the concept of the flow experience to heart is the Rubin Museum of Art.

The Rubin Museum of Art (often affectionately known as the “the Rubin”) is home to a comprehensive collection of art from the Himalayas and surrounding regions. The artistic heritage of this vast and culturally varied area of the world remains relatively obscure. Through changing exhibitions and an array of engaging public

programs, the Rubin offers opportunities to explore the artistic legacy of the Himalayan region and to appreciate its place in the context of world cultures. Most aspects of the institution, from the museum's harmonious public spaces to its seamless blend of music, cinema, and nightlife offerings on Fridays, are steeped in the concept of flow. Visitors are encouraged to be present, stay awhile, and build their own personal connections to Himalayan art.

In the Education Department at the Rubin, our departmental mission statement is "Look deeply, Think deeply, Feel deeply" (Rubin Museum of Art, n.d.). With this in mind, our team works hard to develop gallery experiences that help students and their teachers foster meaningful and authentic interactions with the art and culture of the Himalayas. Csikszentmihalyi's ideas about flow play a strong role in the pedagogy underpinning much of what we do. They inform our engagement strategies for students as well as for visitors from the general public.

For one thing, we've noticed that the quality of conversation and tone of engagement increases when students are encouraged to be playful during inquiry-based conversations. Csikszentmihalyi and Hermanson (1995) write that "learning is intrinsically motivated when it is spontaneous. The most clear examples of intrinsic motivation may be found watching children at play" (p. 68). Gallery experiences are designed to cultivate curiosity and balance the need to make curricular connections with the fun of exploration. Group management is accomplished with a light touch, and teaching points are embedded in conversations that are as enjoyable as they are thoughtful. As we present works of art, we aim to facilitate museum experiences that are pleasurable to participate in because everyone's presence matters, and everyone affects the course of the discussion, just as if we were playing an organized game.

One example of how we try to make this work is through staff training. For the past two years at the Rubin, the school programs team and the visitor experience team within the Education Department worked together to lead a semiannual school tour training series for docents, guides, interns, and volunteers interested in learning to work with K-12 groups in the galleries. During these multisession trainings, we help participants discover for themselves the importance of cultivating curiosity and enjoyment for school groups in museum learning. We have found that the key to training guides to lead responsive, thoughtful, learner-

centered gallery tours is to offer the opportunity to experience such a tour first-hand. After reviewing the basics of our departmental goals for working with students, each training series progresses to an open-ended, inquiry-based, and—frankly—fun experience for the trainees.

In planning for flow experiences, it's also important to prepare for the wide variety of interests that students bring to the museum experience, as well as the varieties of learning styles that come with these interests. Csikszentmihalyi and Hermanson (1995) argue that "interests are partly universal, partly the result of individual experiences, and one's idiosyncratic personal history…Situational interest occurs when one encounters tasks or environments with a degree of uncertainty, challenge, or novelty" (p. 69). In order to offer these kinds of situations, we try to find multiple entry points for students to engage with the art: group conversation, small-group work, independent sketching and exploration time, basic movement games, and more complex drama and theatre activities. Flow will be different for each of us, and will create explicit opportunities for visitors to make unique connections between the art and their own lives.

The affective side of social learning is important to flow experiences in museums as well. When working with students and teachers, we must also find ways to help them connect emotionally to the works of art they perceive; otherwise, the experience runs the risk of being disconnected, rambling, or meaningless. Some of the most powerful conversations that I've observed in the galleries at the Rubin have revolved around either the emotions that a work of art evokes or the curiosity it arouses, inspiring visitors to find out more. Making room in gallery discussions for emotions like wonder, confusion, fear, and joy can ensure a flow experience with lasting influence beyond the museum's walls.

Nishita and her classmates continued to explore the nature of oral histories well after their tour was over. As she was putting on her coat in the museum's lobby, I overheard her telling a classmate a story about another Hindu deity, Parvati, the mother of Ganesha. Nishita's sense of confidence and ownership of the subject was strong, and here she was in her element. In fact, she seemed reluctant to end the experience. I believe Nishita was in the midst of a flow experience—the culmination of a number of the factors Csikszentmihalyi and Hermanson (1995) identified in their research on intrinsic motivation—and I hope that as the field

continues to grow, museum educators will discover new and powerful ways to apply the theory in practice.

References

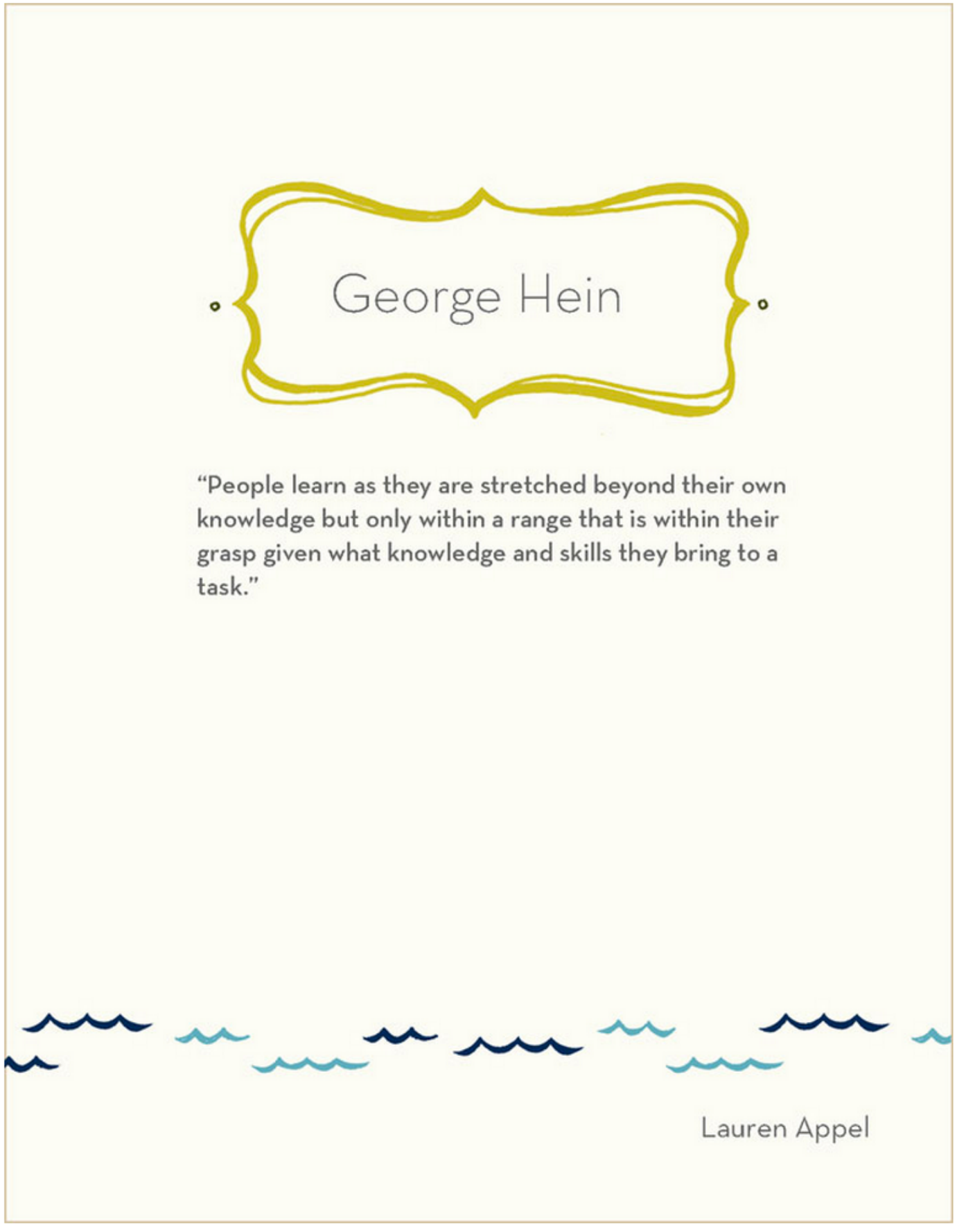
Csikszentmihalyi, M., & Hermanson, K. (1995). Intrinsic motivation in museums: Why does one want to learn? In J. H. Falk & L. D. Dierking (Eds.), Public institutions for personal learning: Establishing a research agenda (pp. 67–77). Washington, DC: American Association of Museums.

Rubin Museum of Art. (n.d.). Education at the Rubin Museum of Art. Retrieved from http://www.rubinmuseum.org/education

11

GEORGE HEIN: META CONSTRUCTIVIST

BY LAUREN APPEL



In “The Significance of Constructivism for Museum Education,” Hein (1991) states, “People learn to learn as they learn” (“Principles of Learning,” para. 3). Take a moment to consider the potential depth of meaning, particularly in the field of museum education, held in this seemingly simple and straightforward statement. This is one aspect of Hein’s work that makes him such an asset to the field of museum education: his unique ability to boil down the tenets of constructivist education—namely, the idea that learners construct their own meaning, both individually and socially—into concise, yet astute statements. His words remind us of the important work of educators in schools, museums, and other sites of learning.

Hein (1991) addresses learning in museums broadly and critically. His work brings together the ideas of many educational theorists, as he draws attention to shared perspectives, challenges, desires, and tensions of educators in museums. As such, his ideas are linked to the work and theories of many others included in this book. He addresses knowledge as both a “personal and social construction” (“Constructivisim,” para. 4), reminds us that “motivation is a key component to learning” (“Principles of Learning,” para. 10), and tells us that “learning involves language” (“Principles of Learning,” para. 5). Hein further clarifies that the act of learning is contextual—a key concept for educators in museums, as every museum provides a unique context for learning. However, he reminds us that we cannot rest on a museum’s context alone to provide a meaningful learning experience; we must also remember that “learning is an active process in which the learner uses sensory input and constructs meaning out of it” (Hein, “Principles of Learning,” para. 5). Notably, the emphasis is on the act of learning, or meaning-making. In museums, objects often replace the learner as the center of action, and Hein’s work reminds us to keep the learner at the center.

Hein (1991) aptly describes a key tension for educators “between our desire as teachers to teach the truth, to present the world ‘as it really is,’ and our desire to let learners construct their own world” (“Constructivism,” para. 9). This delicate balance of presenting factual knowledge and allowing learners to construct their own meaning is a challenge many educators in museums face as they struggle to honor the history and significance of an object or artifact while avoiding didactic teaching that robs students of personal meaning-making. The worry that stu-

dents may leave a museum with “the wrong information” echoes throughout the education departments of museums—particularly those with inquiry-based models of teaching, which often focus on asking open-ended questions that do not have only one correct answer.

Hein (1991) reminds us that we must “think seriously about epistemology and pedagogy” (“Constructivism,” para. 9). In this statement, he joins many educational theorists as they grapple with the role of questions and dialogue in a museum, the role of social learning, the role of visitors’ prior experiences (that inevitably influence their learning), and the relationship between asking questions and giving information.

Many of Hein’s ideas come to life through the practices described in Herz’s (2010) Looking at Art in the Classroom: Art Investigations from the Guggenheim Museum, which provides tools for facilitating inquiry-based discussions about art with students and strategies to connect that experience to other classroom curricula. The art investigation methodology delineated in the book incorporates many of Hein’s key points about constructivist education and learning in museums and puts them into practice. This methodology was one of the first teaching methods I learned as an intern at the Solomon R. Guggenheim Museum while I was also in my first year of graduate school at Bank Street College of Education. The combined experience of interning at Guggenheim while studying at Bank Street gave me a depth of understanding of constructivist learning that has now served me well for a number of years.

The art investigation methodology starts with an observation, prompted by perhaps as simple a question as, “What do you see?” This gives students permission and time to look and make their own observations without being stifled by facts and curatorial details. However, a student’s response to this question will often lead to a more in-depth investigation of a work of art that inevitably will bring to light some curatorial details. Group conversations promote the social aspect of learning, while open-ended questions shape the group’s conversation and allow students to make their own personal connections. The art investigation methodology also strategically intersperses factual information—presented in a way that allows viewers to move forward with observations and still construct their own meaning—with relevant information on which viewers can base their ideas. This

strategy addresses the challenge of “misinformation,” while still providing opportunities for students’ personal connections.

As I was learning to lead tours at the Guggenheim Museum, one of the most salient tips I picked up was how to provide factual information without taking away from the open-ended conversation: imbed that information directly into the discussion. Rather than asking when an object was created or quizzing students on the name of the artist, we, as educators, can make those facts part of the question. After students have had a chance for some observational discussion, one can simply state, “[name of artist] painted this in [year],” followed by an opened-ended question relevant to those facts. Using this strategy in the gallery allowed me to focus the discussion on exciting visitor-driven ideas, rather than on facts the viewer might or might not know.

Hein (1991) reminds us that “it takes time to learn” (“Principles of Learning,” para. 9). The art investigation methodology relies on, and demonstrates to students and teachers, the importance of taking time with a work of art. Many inquiry-based strategies in the galleries lead to lengthy conversations—experiences that cannot always be wrapped up in a tidy 45-minute package. This may seem like a critical challenge; however, I believe that the depth of those lengthy discussions with a work of art or other object is worth the trade-off and is a welcome change from the high-speed nature of many school environments. And hopefully, students will carry the experience with them beyond their visit to a museum, continue to think about it, and perhaps remember it the next time they visit a museum or learn about something at school that is related to their museum visit.

Hein reminds us that beyond creating active hands-on experiences, we must also engage the minds of learners. Leading gallery tours at the Guggenheim showed me firsthand the value of constructivist education and what a special learning opportunity an educator can create by keeping the student at the center of that experience, asking open-ended questions, and sharing information in a way that encourages further exploration and personal meaning-making.

References

Hein, G. (1991). The significance of constructivism for museum education. In A. Zemer (Ed.), The museum and the needs of the people. Retrieved from http://www.exploratorium.edu/ifi/resources/constructivistlearning.html

Herz, R. S. (2010). Looking at art in the classroom: Art investigations from the Guggenheim Museum. New York, NY: Teachers College Press.

Hein, G. (1991) The Museum and the Needs of People.

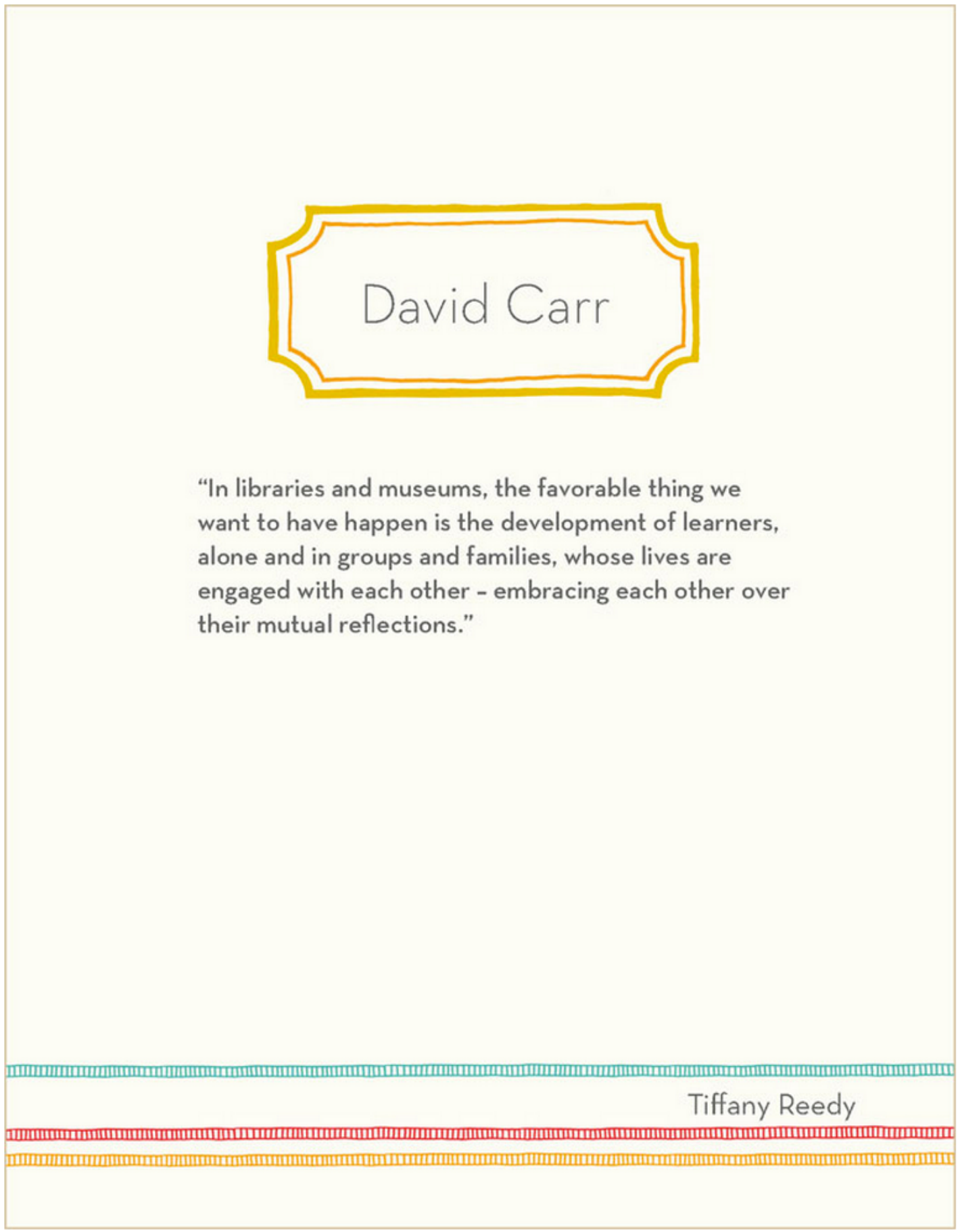
George Hein (1991) CECA (International Committee of Museum Educators) Conference

Rebecca Shulman (2009) Looking at Art in the Classroom: Art Investigations from the Guggenheim Museum

12

DAVID CARR: A POETICS OF QUESTIONS

TIFFANY REEDY



David Carr, associate professor in the School of Information and Library Science at the University of North Carolina at Chapel Hill, has spent his life working to make museums and other cultural institutions become more encompassing to all users. By this he means that every unique individual should be able to experience the museum according to her or his own background, knowledge, and interests. Because cultural institutions welcome a bevy of visitors with diverse backgrounds and perspectives, Carr advocates that the more educators can understand, embrace, and encourage users to evoke their own experiences, the more deeply and personally users will connect with a given exhibit or object and thus move forward their understanding. Carr (2003) believes that the visitor's questions are the critical center to this forward motion: "critical, because museums and libraries exist to assist changes, passages and transformations; critical, because experiences in history, art or analysis can induce a turning point in the knowledge that grounds us" (p. 93).

In writing this essay, I thought of the opening image of Edward P. Jones's seminal debut novel, The Known World. It begins with the protagonist, an experienced farmer yet also a slave, kneeling down and eating a small pinch of dirt. Appropriately named Moses, he is tasked with leading the members of the farm after a recent tragic event. The moment is poignant, striking, and all the while, revelatory. Even though Moses has lived his entire life on the farm and is considered an authority figure, at the moment we meet him he is in a place of stasis. For before Moses can act, before he can move forward or know what direction to proceed, he must ask the Earth a question.

Carr has steadfastly dedicated his life to improving the effect and impact of cultural institutions. He asserts that in order for us gain understanding as human beings, we are continually "becoming"—a process in which we wonder, question, hypothesize, become enlightened, and do it all over again. These questions are rooted in who we are and are shaped by our personal experiences. Carr (2003) says:

> A question implies motion. As individuals in the process of becoming, our integrity is shaped over time by the quality of the questions we ask and sus-

> tain, and how they move us along…If a question implies motion, think of each inquiry we build as an engine of cognition. (pp. 93–94)

Cultural institutions are particularly powerful spaces where these questions can spark the engine of cognition, leading us, as Carr believes, to become a more complete person. Museum educators and educational programs in particular must embrace and encourage questions, guiding visitors in such a way that they are always wondering, “What does this mean to my life?”

The New York Public Library’s Schomburg Center for Research in Black Culture is the defining repository of African American culture in the world. Open to the public, filled with events and exhibits, the space provides the opportunity to research your own heritage while examining primary source documents. Annually the Schomburg Center’s Education Department, led by extraordinary museum educator Deirdre Hollman, opens its doors to the public for the week-long Summer Education Institute: Black History 360o. Hollman believes firmly in creating a compelling experience for her participants, who mainly consist of local-area educators and community members. She is able to produce an engaging experience by devoting a considerable amount of time to the structure of the week. Even though the presentations—lectures coupled with breakout sessions—may first appear to be in a classic conference format, the institute is meticulously structured specifically to promote a self-sustaining interactive narrative for all involved. Carr (2003) says:

> I believe that the center of the educator’s definitive purpose, no matter what the institution, is to construct a situation where questions can find form. This is also the purpose of using cultural institutions, seeing exhibitions, and seeking ideas through information. (p. 94)

Each day begins with a stimulating lecture from a distinct academic icon. Each lecturer focuses on a specific content area, either historically or thematically based, that not only highlights moments of particular interest, but at the same time invites participants to question the origins and relevance of these specific histories. Professor Quintard Taylor is a prominent scholar of the African American westward expansion. During his lecture at the 2011 Summer Education Insti-

tute, he emphatically provoked participants to question what they knew about black migration to the West and its significance in American history. His delivery was profoundly informed yet colloquial, and because of this Taylor motivated a discussion on the revision of history. The same was true for preeminent jazz studies scholar Dr. Bob O'Meally, who not only placed significance on the comprehensive presentation of historical events and movements within music, but also invited inquiry into those events, promoting curiosity about their relevance and cultural implications. Carr (2003) tells us:

> …although they inevitably cause a cognitive stir….The questions are about motion and becoming, looking backwards to the known world, but wondering at it's evidence. (p. 96)

Conversations that occur at the Summer Education Institute are intrinsically motivated. The discourse from the breakout session focused on Malcolm X was one such conversation. Columbia University professor Cheryl Green hosted this session, which initially started as an open discussion on her robust character-study-driven book on the late political leader. While we were delving into particular moments in Malcolm X's life, an unplanned conversation evolved, focused exclusively on the personal stories of each participant. One narrative would inspire another and then another: "I saw Malcolm X speak on a soap box on 125 when I was a little girl." "My brother read his autobiography out loud to me; it changed my life." "My father had a conversation with him at a restaurant." Details flowed; fleeting interactions, distant memories, and elongated scenes turned into years that in turn formed decades of the leader's life, producing a new and interactive identity for Malcolm X. As Carr (2003) says:

> The museum and the library are workshops for the unfinished questions of others lives' and our own. The educator's workplace lies within the unfinished question that inspires and carries the learner forward. (p. 97)

He further notes:

> [Questions] initiate more possible connections, and the greater the likelihood that pertinent information will appear nearby. As our spoken questions expand, so do the hidden dimensions of the visible, possible world. (Carr, 2003, p. 101)

The creation of this new interactive identity for Malcolm X was made possible only by the complementary nature of the conversation coupled with the unique experiences carried through the years by the willing workshop participants. The experiences shared during the session illuminated the continuous inquiry centered on a critical understanding of an often polemic figure, transforming him into a more accessible human being. As Carr suggests, these experiences come together to build a more meaningful understanding of museum objects. This was evident as participants then stepped into the gallery, viewing the latest exhibit on Malcolm X, and examining objects like the microphone he used at various speaking events, his personal Koran, and letters to his wife.

Carr's emphasis on personal experiences and the questions that come from them was pivotal in each workshop. Throughout the week there were many that provided an array of classroom activities, with the hope that the content and practices presented would be successfully used and applied in the participants' own classrooms. I developed and led one of these classroom activity sessions. The lesson centered on seminal artist Jerry Pinkney, a celebrated children's book author and painter who has produced some of the most vibrant and indelible illustrations of black Americans during the westward expansion. He has painted cowboys, pioneers, rodeo stars, and buffalo soldiers, real black Americans who played a real role in the West. Working with the original watercolors housed at the Schomburg (we were able to have all 15 in the room with us!), I invited the workshop participants to carefully examine the paintings and the story Pinkney was telling and then write succinct narratives in the form of "I am" poems in the voice of the black American featured in the watercolor. The process involved participants asking a "simple question" to stimulate their imagination. Carr would assert that sometimes the "most naïve" questions lead to some of the most astounding answers. Soon, ideas blossomed and discussions flourished. Many people's schema of the West, of white cowboys and red Indians, was enriched. One attendee said, "I always wanted to play 'cowboys and Indians' when I was a boy, but

because I was black, I never felt I could. Now I know there were black cowboys, black Texas Rangers and fur trappers." It is undeniable that good questions support creativity, and in my workshop, attendees indeed expanded their knowledge creatively. Carr (2003) tells us:

> A question is always asked from a particular place and perspective, and with a specific idea or construction in mind. Continuity and connectedness flow through the learner's life and into the question. (p. 102)

The Summer Education Institute embodies Carr's theories. It is a space that not only welcomes questions and personal experiences but is also strengthened by them—so much so, that it could not function without them. It is democratic in its structure; the high school history teacher or curious Harlem resident can attend. Together, all the participants and elite academics embark on the process of becoming—they question, absorb, discriminate, and then keep asking more. Unknowingly echoing Carr, one participant wrote, "I felt like I was back in college for a week, but instead of papers and late nights, I experienced rich days filled with information that I hadn't fully thought about and it sparked something in me." Let us, as museum educators ask the Earth some questions.

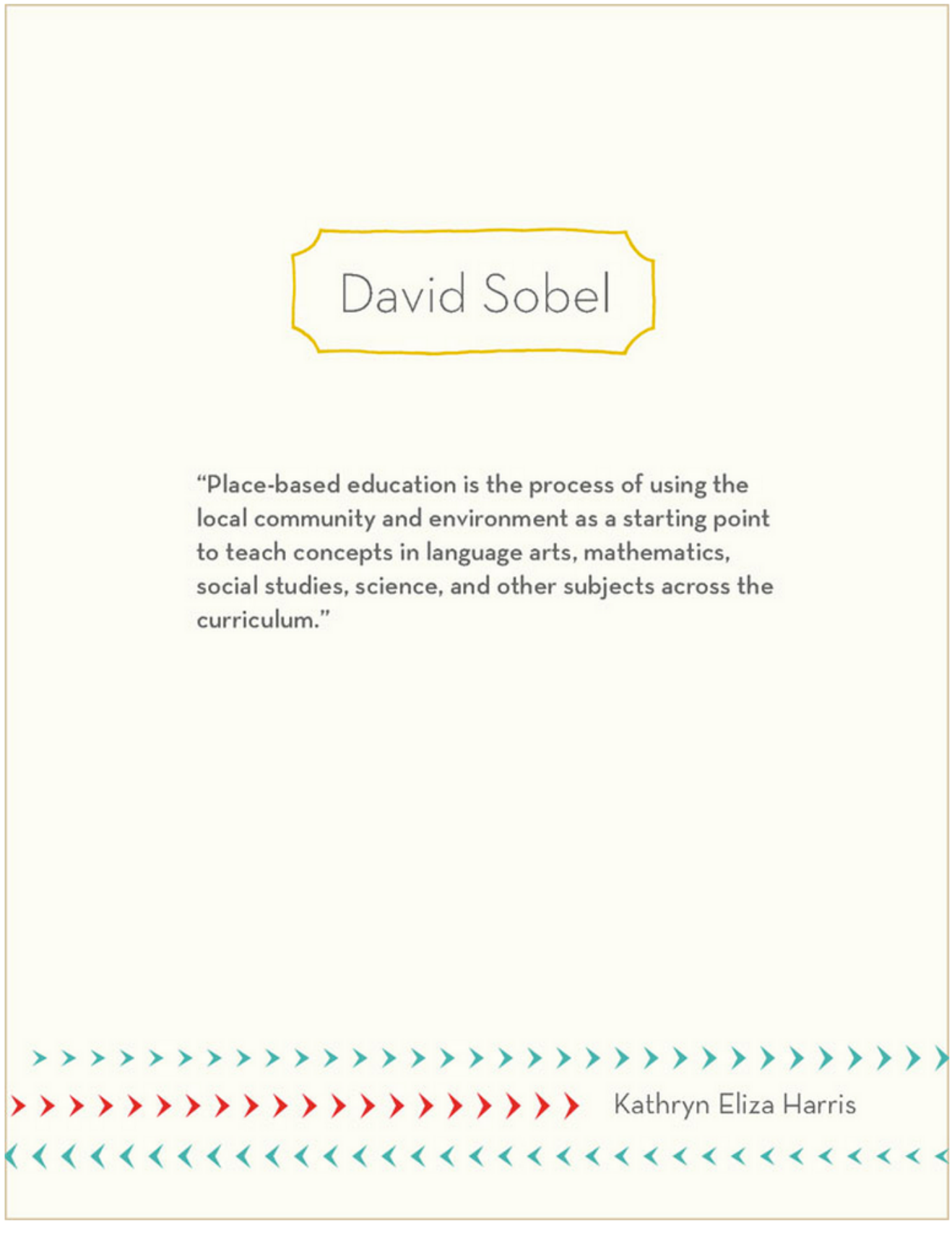
References

Carr, D. (2003). The promise of cultural institutions. Walnut Creek, CA: AltaMira Press.

13

DAVID SOBEL: PLEASE IN MY BACKYARD

BY KATHERYN ELIZA HARRIS



I learned a lot from debating in high school, but what stuck with me the most was the idea of giving back to your community. High school debate teams are an incredibly insular community whose existence depends on former debaters returning to judge and coach. Its demanding schedule, incredibly specific skill set, and pervasive lexicon all work to create and maintain an environment that is, to outsiders, intimidating at best and hostile at worst. If recent high school graduates didn't give up their weekends to judge, tournaments would be without a core group of judges who are intimately familiar with the language, social norms, and rules of the activity—a familiarity that ideally enables these college students to evaluate debate rounds in an informed and objective way.

As a former debater, I recognized the importance of being one of those former debaters who returned to work at tournaments. I felt I owed it to an activity that had done so much for me—and to a community that had always been there for me, weekend after weekend, year after year, on high school and college campuses from the Hudson River Valley to the Bay Area. I've been judging debates on and off in the decade since graduating, and this year, I've started being an assistant coach.

I feel that the idea that a community relies on the obligations its members have to each other—which I understand from my awareness of how the debate team community is connected—is embedded in the kind of place- and community-based education that theorist David Sobel champions. Integrating their community and physical location into a curriculum enables students to establish a unique relationship with their surroundings—a relationship that, like my relationship with high school debate, spurs students to action. Sobel (2004) explains:

> Emphasizing hands-on, real-world learning experiences, this approach to education increases academic achievement, helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates a heightened commitment to serving as active, contributing citizens. Community vitality and environmental quality are improved through the active engagement of local citizens, community organizations, and environmental resources in the life of the school. (p. 7)

With a bachelor's in English from Williams College and a master's of education from Antioch University New England, Sobel has seen his theories play out in schools across the country. In Harrisville, New Hampshire, Sobel cofounded the Harrisville Children's Center and served on the school board there and in Nelson, New Hampshire. He was a staff development and science curriculum consultant to New Hampshire and Vermont schools and currently serves on the editorial board of the Holistic Education Review. In his many articles and books, there are examples of schools that, with his guidance, brought the outdoors into the classroom. "Place-based education is the antidote to the not-thinking about the Earth common in many schools," writes Sobel (2004, p. 6).

Museums—particularly those, such as the Louisa May Alcott House in Concord, Massachusetts, that are constructed around a specific, often historic, location—are the perfect institutions to emphasize this community relationship. Moreover, cultural spaces in students' own communities can serve as museums of sorts, enabling students to view with newfound inquiry areas they'd taken for granted, while helping students make connections to their classroom studies and their own lives. Finally, nontraditional museums, such as the urban archivist organization City Lore, take their community ties to the next level, actively looking for communities that could benefit from their resources.

Museums that are inherently tied to their location provide their subject matter with its genuine context, placing their visitors right in the midst of that subject matter. Sobel (1996) brings up the example of a first- and second- grade teacher in Vermont whose students studied a local beaver pond and marsh for an entire year. He emphasizes the importance of context:

> Suffering from the time sickness of trying to do too much too quickly, we infect our children with our impatience. Most nature study or environmental education in American elementary schools lasts a matter of weeks, maybe a month...Jo Anne Kruschak[']s]...first and second graders visited the pond, about a quarter mile from the school, once a week in all kinds of weather. "In the beginning," Kruschak recalls, "I thought we'd run out of things to do and study by Thanksgiving. By March I realized there was no way we could follow up on all the neat opportunities by the end of the year." (Sobel, 1996, pp. 37–38)

A perfect example of a museum tied to its location and context is Weeksville Heritage Center in Brooklyn, New York, under the direction of Pamela Green. Composed of historic houses, each representing a different time period during which Weeksville was a thriving community of free African Americans, Weeksville is a museum whose very context and location is its permanent collection.

On a graduate school class visit to Weeksville, I couldn't shake the feeling that I was stepping through time. Walking from house to house, picking up and holding artifacts, and physically moving around a kitchen put all of us right into the experiences of Weeksville's inhabitants. It was easy for me to imagine a family living in that community and for me to make connections as we tracked Weeksville from decade to decade. Experiencing for myself what life must have been like in those time periods—and seeing the connection between the community and its environment—deepened my understanding of those decades as well as my understanding of a specific community I had previously known very little about. I was also able to personally connect to the objects in the houses, as well as to the houses themselves; it was impossible not to think of Weeksville's inhabitants as people not too different from myself.

Weeksville as an institution knows full well how important its location is to its mission; constantly seeking to strengthen its ties to its neighborhood, Weeksville includes community needs as part of its programming. Farmer's markets, youth nutrition programs, and the year-round Weeksville kitchen garden assist community members in making healthy food choices while giving them access to affordable fresh produce. Exhibitions in Weeksville's new art gallery and in its historic houses showcase local artists; its performing arts programming provides a stage for emerging artists who reveal new dimensions of the African diaspora, helping those artists reach larger audiences. More than just simply the preserver of artifacts passed down through history, Weeksville Heritage Center is truly a cultural touchstone for its community.

Another museum I feel does an exemplary job of being responsive to its community is the Museum of Chinese in America (MOCA) in New York City. Through its community walking tours, family workshops, and oral history projects, MOCA puts Chinatown and the Chinese American community as a whole at the center

of its mission. Created as the New York Chinatown History Project to document and preserve Chinatown's rapidly changing history, MOCA is also an archival institution, dedicated to research and to reaching out to capture the memories and personal histories of Chinatown's inhabitants. Tchen (1992) outlines the role MOCA hopes to have in its community:

> What, then, can a dialogue-driven museum mean? For us it has meant engaging with our audiences in mutually exploring the memory and meaning of Chinatown's past...People constantly reformulate their personal pasts: how people want to think of themselves in the present necessarily influences what they will remember about the past, and conversely, what they remember about themselves in the past influences how they think about themselves in the present. (pp 291–293)

In creating and sustaining dialogues about community issues, MOCA ensures that it is not only constantly adapting to the needs of its audience and its community but that it also serves as a focal point for community change. MOCA is a cultural center and activist hotspot for artists, researchers, community organizers, the citizens of Chinatown, Chinese Americans across the country, and New Yorkers as a whole.

Place-based education doesn't have to occur in a formal museum setting. In fact, exploring one's community can unearth a myriad of discoveries connecting to many different subjects. Sobel (2004) warns of the disconnect between many students and their environment:

> In my mid-twenties, I became interested in plant taxonomy. After peering at a violet under a hand lens one afternoon, I paged through Gray's Manual of Botany trying to understand the difference between stamens, pistils, and calyxes, when poof! the proverbial light bulb went on. In my mind's eye, I saw the much-larger-than-life-size model of a flower that had perched on the lab table at the front left corner of my tenth grade biology classroom. "That was a model of flowers that grew right outside the classroom door!" I said to myself in disbelief. As a high school biology student, my unquestioned

> misconception was that this was a model of a rainforest flower, or at least a far-away flower. It never occurred to me that real flowers, with real flower parts, existed on the school playground. Yet, I was your true science geek. (p. 6)

Through examining the relationships that exist between people and the environment around them, students can develop a newfound respect for and curiosity about their environment. Sobel (1996) describes what happened when sixth graders in Utah noticed on a map that there was a hazardous waste site three blocks from their school:

> Students contacted the EPA, the owner of the barrel yard, and the mayor. They studied literature on hazardous waste and the problems involved in cleaning it up. They attracted reporters intrigued with the children's persistence. And, after a year and a half, they not only witnessed the removal of the 50,000 barrels and the beginnings of an EPA clean up, but they wrote legislation, lobbied legislators, and saw the passage of a Utah state law that set up a hazardous waste clean-up fund. (p. 34)

Simply by looking at a map of their neighborhood, the students found the issue of hazardous material removal—an issue many of the students probably hadn't even thought about previously—to be an intensely personal one.

I experienced this firsthand in one of my museum education classes, when we took a trip to Riverside Park—literally right down the street from Bank Street College. While most of the class had been aware of the park and a few of us had even spent some time there, none of us had really thought about the park or explored it in an intellectual way. Once we were asked to truly observe and reflect on our surroundings, each one of us found something in the park to connect with—something we wanted to keep investigating.

One of my classmates—whose focus is art history—was so fascinated with the geology of the park that she researched the geology of Manhattan on her own. During our student-teaching conference group, she even talked about how aware she now is of the city's geology, describing how exciting it is for her to see specific rock formations when she jogs through Central Park. Simply spending a few

hours actively exploring Riverside Park made such an impression on this student—who has admitted that she never used to care about geology—that she thinks about the processes occurring under her feet everywhere she goes. Learning about geology from a museum exhibit probably wouldn't have given this student as immediate a connection—or taught her to look at her surroundings in a completely different way.

Some museums search out communities and places, bringing their knowledge and resources directly to students in their own neighborhoods. City Lore, a nonprofit committed to its role as a cultural archivist, uses community-based trips and projects, museum trips, and themed artistic residencies to help students connect to their environment—and to the environments of other cultures. Projects like Place Matters raise awareness of often overlooked locations in New York City and explore the profound relationships people have with their surroundings. Others, like the People's Poetry Project, help the disenfranchised find their voices, giving them a platform and the means to express themselves.

One City Lore project I find particularly exciting is a film project centering on the skateboarding community. Often viewed as annoyances and not taken seriously as either artists or athletes, skateboarders are part of an insular community that stretches across the country. In working with the skateboarding community in New York City to create a documentary, City Lore is raising awareness about that community and fighting the public's preconceptions of skateboarding culture, while at the same time creating a record of skateboarding moves, which often go undocumented and unobserved by the general public. Above all, the project gives skateboarders the opportunity to tell their own stories to a general audience, taking control of how others perceive them for perhaps the first time.

"Place-based education," Sobel (2004) argues, "converts the activist plaint of Not In My Backyard (NIMBY) to Please In My Backyard (PIMBY)" (p. 7). He continues:

> Please In My Backyard means that schooling should start out the back door with a focus on the neighborhood rather than the solar system in the early grades...It's a simple proposition really. Bring education back into the neighborhood. Connect students with adult mentors, conservation commissions, and local businesses. Get teachers and students into the community,

> into the woods, and on the streets—closer to beauty and true grit. Get the town engineer, the mayor, and the environmental educators onto the schoolyard and inside the four walls of the school. These are the places we all belong, (Sobel, 2004, pp. 7–8)

Tragically, many students are so disconnected from their environments and communities that they lack that sense of belonging. It is our duty as educators to change that.

References

Sobel, D. (1996). Beyond ecophobia: Reclaiming the heart in nature education. Great Barrington, MA: Orion Society.

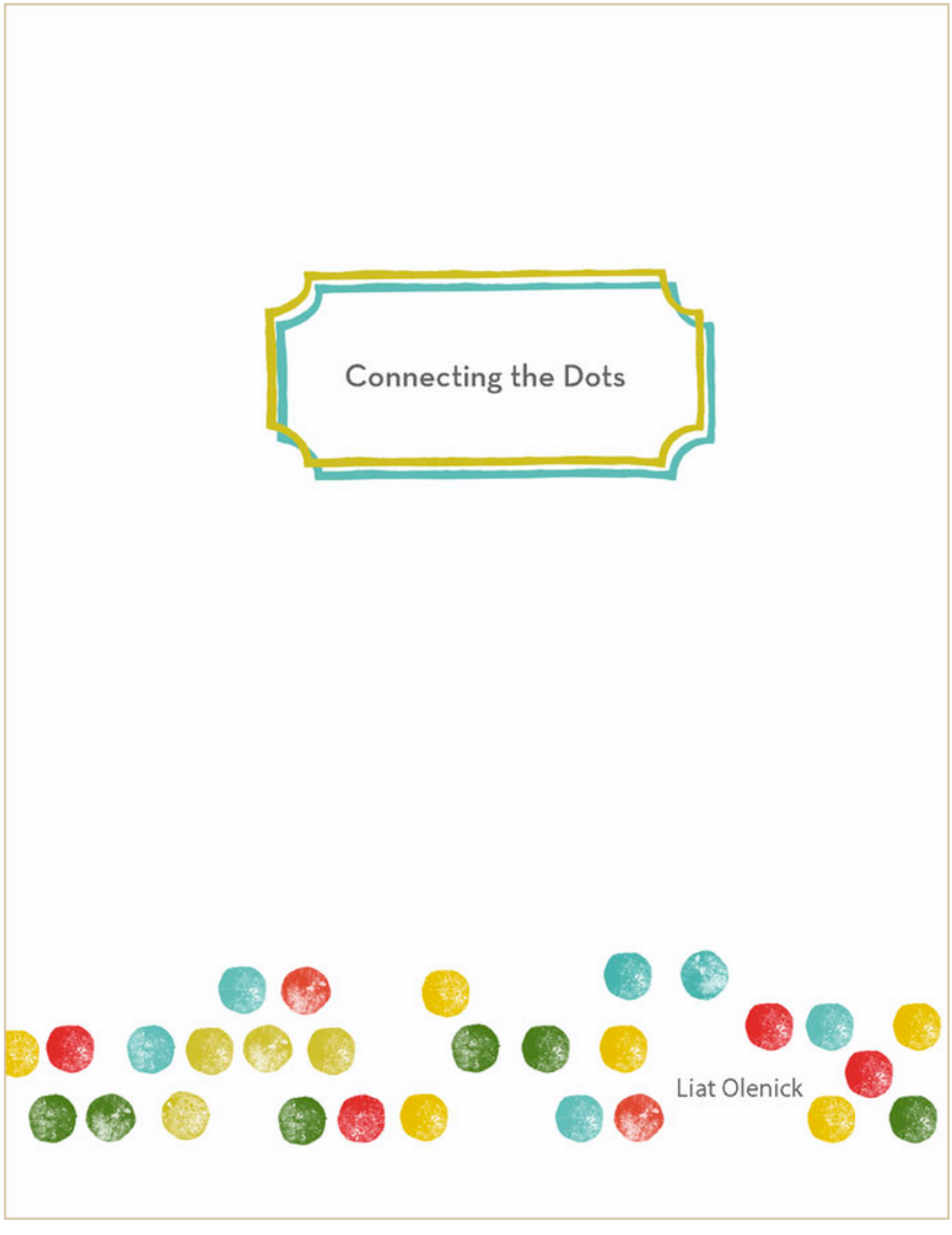
Sobel, D. (2004). Place-based education: Connecting classrooms and communities. Great Barrington, MA: Orion Society.

Tchen, J. K. W. (1992). Creating a Dialogic Museum: The Chinatown History Museum Experiment. In I. Karp, C. M. Kreamer, & S. D. Lavine (Eds.), Museums as communities: The politics of public culture (pp. 285–326). Washington, DC: Smithsonian Institution Press.

14

CONNECTING THE DOTS

BY LIAT OLENICK



We have looked at how Maxine Greene, Paulo Freire, George Hein, and Rika Burnham each draw on constructivist theory as well as John Dewey's theory of experience in their work. Although each author employs this philosophy toward a unique perspective on its meaning and implementation, all touch on five central themes that are either aspects of or prerequisites for constructivist learning. These themes are time, silence and listening, meaningful and deliberate experience, possibility and freedom, and implicit in the latter, trust.

We are advocating a teacher-learner relationship called constructivism, which, according to Hein (1991 p.2), requires that each learner, individually and as part of a group, "constructs knowledge for themselves," (p. 2) the emphasis, is on the learner, rather than on the lesson. In order for learners to be able to make meaning for themselves, they need time to return to the same subject more than once, to reflect and explore deeply, to engage in the flow experiences championed by Csiksentmihalyi. "It takes time to learn," writes Hein.

"Learning is not instantaneous. For significant learning we need to revisit ideas, ponder them, try them out, play with them and use them. This cannot happen in the 5-10 minutes usually spend in a gallery…If you reflect on anything you have learned, you soon realize that it is the product of repeated exposure and thought.

Several of the contributors to this book have been particularly attracted to the teaching method of Rika Burnham. Burnham echoes Hein's argument, noting the importance of the element of time "in all aesthetic encounters." Although this element may seem minor in comparison to what will follow here, my own experiences as an educator and as a learner have convinced me of its significance, especially in settings in which learners are empowered to make their own meaning.

The most exciting learning I experienced as a child occurred outside of school, specifically in museums and parks that I visited repeatedly and frequently over years. It was in these settings that I truly constructed my own meaning, that I was intrinsically motivated to explore, play and reflect. It is these experiences that I remember more than any activity or lesson from elementary school. To give one example, I remember my many visits to Metropolitan Museum of Art vividly. I spent

so much time there that whenever I visit now I experience a wave of nostalgia similar to the way I feel passing the house I grew up in. It was comforting and familiar, yet magical in that it always contained something new and wondrous for me to unearth. As a child, I would wander the American wing again and again, imagining the people who might have lived in the period rooms, or I would draw in the sculpture garden, or peer into the cases of Byzantine artifacts. Then as I got older, I would float through the rooms of modern paintings, looking for each in its right place, a familiar face in the crowd, and notice new colors or elements of composition I had never considered before. It was these experiences, I am convinced, that led to my love of history and of art, because through repetition and revisiting the objects I saw came both came alive for me and became a part of me.

We have looked into classrooms of both museums and schools and have seen that many classroom teachers are rarely afforded the authority to decide how time is used. There is so much material to be covered, and often schools resort to very rigid scheduling to manage the demands of testing and state curriculum standards. In the older grades, time may be even more of a crucial if missing commodity due to curriculum standards. We have pondered how we can teach for meaning and allow students to take agency over their learning when you are compelled to teach topics superficially and at a breathtaking pace? Moreover, how can you leave room for silence and listening without adequate time?

Both silence and listening take time and are fundamental in the context of communication and listening, which are, in turn, essential to learning, writes Freire. (1998, p.104) Silence affords the listener, whether the teacher or student, an opportunity to focus on listening in the fullest sense, of “being open to the word of the other, to the gesture of the other, to the differences of the other.” (Freire, p. 107). Several of our contributors have referred to Burnham (2005), who likewise advocates the need for, “a place for silence as well as for speech.”(p.68) During our graduate class experience at the Frick, she did, in fact, leave space for silence, telling us to “take a few minutes to look” before we began our conversation. This set the tone for subsequent comfortable silences during our time with her. Often, after an insightful comment, the group would lapse into reflective silence in which we would take time to look at the painting even more closely.

My experience has led me to believe that many educators are uncomfortable with true silence, even as they demand it from their students while they are speaking. Too often, teachers, including myself, express anger or disappointment when not every hand goes up immediately after they have asked a question. And then on the flipside, I have seen teachers in “conversations” with students in which theirs is the only voice heard, even in a setting explicitly intended for mutual communication, or in Freire’s words, for “speaking with,” rather than “speaking to.”(1998, p.105) If as Freire writes, “To teach is not to transfer the comprehension of the object to a student but to instigate the student, who is a knowing subject, to become capable of comprehending and of communicating what has been comprehended,” then affording students the opportunity to listen and be listened to by peers and teachers is essential to their learning (p.106).

We have examined how students need to be listened to in a meaningful way, however, not merely through show and tell or in response to narrow questions and tasks. As a student teacher, I led a “wild edibles” trip to a local park. As a follow up, I endeavored to engage the students in open ended and critical thinking based on our experience. After sharing and drawing a representation of something they learned on the trip, they chose one of three “reflection questions” about the role of Lenape women to discuss and answer with a partner and then shared with the class. They came up with wonderful ideas, including possibilities I had not yet considered or imagined.

Although the trip itself was exciting and meaningful, much of the meaning of this activity was constructed in the classroom before and after our adventure. As Dewey suggests, experience becomes meanAs Dewey suggests, and experience becomes particularly meaningful. I was fortunate to have the time for a post- trip lesson, and in an ideal world, would have done yet another post-trip activity, but time again, was the limiting factor. Museums cannot always control for what kind of experience happens in classrooms. Even programs with pre and post trip classroom educator visits, or repeat museum visits may be limited in duration and scope. They can and should, however, so embed themselves in their communities, that any experience within their bounds automatically connects to previous and subsequent related experiences. Thus the context of a museum ex-

perience may be an element of programming or resources provided to classrooms, or a factor of perpetuating the communicative circle in which the museum is fundamentally responsive to its community.

The instrumentality of context recalls Dewey's (1938) qualifications for experience as education. "Everything," he writes, "depends on the quality of the experience which is had…" (p.27) For an experience to truly lead to learning, it must not be in isolation, rather it should be part of a continuum of experiences that draws on learners previous experience and informs or influences future experiences. (p.48) Going to the park is fun, but for it to be a meaningful learning experience, it must be grounded in prior and subsequent learning experiences, whether as part of a program or through independent teacher or parent initiatives.

That an experience informs future experiences, however, does not suggest that the sole purpose of learning experiences is in preparation for the future. Preparation connotes a singular purpose whereas the idea that an experience should inform later experiences is a by-product of meaningful engagement. Thus Dewey declares "the idea of using the present simply to get ready for the future contradicts itself…We always live at the time we live and not some other time, and only by extracting at each present time the full meaning of each present experience are we prepared for doing the same thing in the future. This is the only preparation which in the long run amounts to anything." (1938, p.49)

The key word here is simple. Although as educators we must consider our impact on our student's futures and consider skill building and the extent to which we deepen our students understanding of a particular subject, this cannot be our sole intent. The present is meaningful unto itself, and part of our efforts must be focused on the quality of experience on its own. As Csikszentmihalyi suggests, experience must not only stimulate the mind, but must touch our hearts.

In college, I completed an especially experience based Art History class. It was an East Asian Art course, and our final assignment was to use the readings we had done on Buddhism, Shintoism and Zen to construct our own Zen rock garden. This activity was not intended to prepare me for a career in rock garden design, rather to merely make my own learning in the class as meaningful and per-

sonal as possible. And yet, in constructing my garden, I internalized the physical and conceptual attributes of a Zen garden in a personal and creative way, that did in the end, directly inform a future experience.

In the summer of 2010, I led a studio arts camp for twenty four and five year olds. Our second trip was to the Brooklyn Botanic Gardens, where I now work as a Discovery Garden Instructor, where we sketched and meditated in the Japanese garden. Then, in an impromptu burst of inspiration while we waited for the belated bus, we made a Zen rock garden with our bodies. The children chose a rock shape and placement and formed their body accordingly and then imagined that they were rocks, and then mountains. The next day, we made our own miniature rock gardens, intended as a tool for meditation, or “emptying our brains,” and I feel that the children got more out of this than any other project we did. Not only was it hands-on, but also, it stemmed from a series of related and intrinsically meaningful experiences that built on one another, both for the students and for myself as a student of education.

Part of what made these experiences so powerful, was that they occurred in a community of learners. Dewey was one of the first to underscore the social nature of learning (1938, p.38) while also noting hard work needed to foster a progressive learning community. Vigotsky showed us the importance of peer interaction. Later, Bruner (1986), in his exploration of language and education, likewise recognized “that learning in most settings is a communal activity, a sharing of culture.” He continues and writes that, “it is not just that the child must make his knowledge his own, but he must make it his own in a community of those who share his sense of belonging to a culture…” Bruner highlights “the importance of negotiating and sharing – in a world of joint culture creating as an object of schooling and as an appropriate step en route to becoming a member of the adult society in which one lives out ones life.” (p.127) This statement derives from his view that we are constantly reconstructing and renegotiating our reality and culture. As he puts it, “a culture is as much a forum for negotiating and renegotiating meaning and for explicating action as it is a set of rules or specifications for action. ”And since culture is constantly being recreated, and learning is at once a cultural and social experience as well as an “inventive” process, he argues that, “…Education, if it is to prepare the young for life as lived, should also partake of

the spirit of a forum, of negotiation, of the recreation of meaning." (1986, p.123) Bruner suggests education can do so through deliberate and open ended language. He cites an example of a teacher of his own, who used language to include students in the negotiation of meaning and to "extend their worlds of wonder,"(1986, p.126) rather than just feeding them facts, figures and foregone conclusions.

When students make meaning for themselves, by creating and reflecting and solving problems and relishing their roles as learners, then there is a sense that all is not predetermined. Thus, openness and possibility are the underlying characteristic of constructivist learning. Without a little breathing room, without that essential "freedom that moves us" (Freire p.102) to explore and an awareness of possibilities, learners are disempowered and have no reason to struggle with the construction of their own meaning. To allow for possibility, is to deny absolutes, to refuse to "live history as determinism," (Freire p.103) and to turn ones' back "On any idea of an all encompassing machine which describes nature and instead look towards all those wonderful, individual living beings-the learners- each of which creates his or her own model to explain nature."(Hein, p.3)

Thus, according to Freire, (1998) the progressive teacher's role is to help "students to recognize themselves as the architects of their own cognition process." Greene (2001) later echoes this thought when she argues that "meanings must be achieved by those with a sense of agency; they do not preexist." (p.124) Not only must students be the ones piecing together and organizing meaning, but also, they must be aware of themselves as agents, as empowered and active learners. According to Freire (1998), to facilitate this sense of agency, the teacher must affirm and "instigate the student's inherent curiosity, instead of softening of domesticating it." In other words, the teacher must listen to and encourage students' curiosity instead of suppressing it in the interest of pacing, testing, planning or classroom control. In true student driven settings, where students make their own meaning, it is their curiosity that guides the learning. I have found the freedom to do this as an outdoor educator. The combination of not having to conform to the demands of the school with the instinctual fascination children have for the natural world allowed me to truly let student curiosity structure our activities. So, for instance, when I worked at an outdoor education center in the Berk-

shires, we could and would spend an entire day exploring the stream and surrounding ecosystems if the students remained interested and engaged in a “process of discovery.” (Freire p.105)

In my experience, often what passes for discovery based learning in the classroom, only somewhat resembles the process of discovery in that all the “discoveries” are meticulously predetermined. In order for this process to actually be experienced as discovery, teachers and students must possess a sense of freedom and alternatives. There must be space and time for teachers and students alike to wonder, for teachers to say, “I don’t know,” and for many right answers.

What Freire conceives as freedom, Greene (2001) conceives as possibility, writing, “we are concerned with possibility, with opening windows on alternative realities”(p.45), and quoting Tennyson’s Ulysses “how dull it is to pause, to make an end”(p.46). Recalling Freire’s (1998) reflections on the process of discovery, Greene conceives of learning as ideally “stimulated by the desire to explore, to find out, to go in search. This, she argues, “Is the learning that goes beyond teaching-the only significant learning... It is self initiated at one point, permeated by wonder, studded by moments of questioning, always with a sense that there is something out there, something worthwhile beyond.”

Without this sense of something worthwhile beyond, constructing meaning is virtually impossible and pointless. It is only with this sense of possibility and freedom that we learn, not only about art or the world around us, but also, about ourselves. This is so important that Greene (2001) quotes this same G.B. Madison quote several times in her reflections:

> It is through imagination, the realm of pure possibility that we freely make ourselves to be who or what we are, while in the process preserving the freedom and possibility to be yet otherwise than that we have become and merely are. (p.118)

Greene (2001) sees the arts in particular as a refuge of the imagination with the unique ability to empower students to “become creatively what they are” (p.118), and counter the “dread” (p.119) of education based around the transmission of

“dead and incomplete” facts (p.126). It is through connecting with art, that Greene believes we can avoid Freire’s (1998) “bureaucratizing of the mind,” defined as “a state of refined estrangement, of the mind’s abdication of its own essential self” and of “a “mass production” of the individual and of conformity in the face of situations considered to be irreversible because of destiny” (p.103). As someone who was never a “science person” until recently, I can relate to the intimidation and dread that accompanies learning that is so tied up in facts and formulas that it precludes wonder discovery. For me as a middle and high school student, Science represented the absence of possibility. In English and History I felt free to make connections and come up with theories, but in science, I was a passive receiver of knowledge. I now realize that this has more to do with the way in which I was taught than with science. As an adult, some of my most meaningful learning experiences have been in the realm of science, in exploratory settings where I felt empowered to make the natural world my own. Not only that, but my favorite subject to teach is science, because it now seems replete with possibility.

Freire’s so-called “bureaucratization of the mind” has many roots. Both Freire and Greene note the impact of testing and associated pressure on learning and teaching, as well as the powerlessness of teachers in the face of universal top-down standards and curriculum. According to Greene,

> When we are compelled or lured to remain passive receivers of discrete parts of a curriculum , say obliged to speak in a manner others determine and to follow some extrinsic logic, we become disempowered. We are no longer able to address students as diverse persons in quest of themselves, as who they really are… (p.126)

Not only do students need to be empowered in order to construct meaning out of their lives, but also teachers must be empowered to help students do so. Perhaps it is the perception of this powerlessness of classroom teachers and associated distaste for facts, those dull pauses and ends that Tennyson disparaged, that leads Greene to restrict her “ aesthetic moments” to interactions with the fine arts. When empowered, however, students and teachers can build meaning and form connections in almost any setting.

We have seen throughout this book how Burnham (2005) similarly sees the museum as a refuge of sorts, as “places of a possibility” with the potential “to inspire and encourage people to dream a little with them” (p.75). Unlike those who see information as paramount, Burnham believes that the educators’ knowledge of an artwork “enables her to suggest possibilities, not to establish conclusive interpretations that she will impose on her students.” Through these suggestions the educator may provide visitors with information (p.71). “The skillful use of information,” Burnham continues, “makes the students aware of ambiguities… which ultimately… enriches their experience” (p.72). There is a limit to which students can construct their own meaning in the absence of information. It is in using information to make students aware of possibilities and ambiguities that the sharing of information becomes an important component of constructivist learning.

These possibilities and ambiguities are also what transform hands on activities into meaningful experiences for the heart and mind. Without possibility, there is no room for wonder or the joy of a personal connection. Moreover, in allowing for both possibility and ambiguity, Rika trusted us to come to our own reasonable interpretations of the work at hand, just as she trusted us with silence. It is this trust, that underlies every situation in which learners construct their own meanings, whether in an aesthetic moment in response to a piece of art, in a museum setting or in the classroom while learning about states of matter.

Permitting learners to construct their own understanding of reality requires “faith that our learners will indeed construct meaning which we will find acceptable” (Hein, 1991 p. 4). The reader has seen how in several articles, Burnham trusted us to offer pertinent and appropriate comments. Likewise, when teachers in museums and in the classroom have faith in their students’ ability to construct knowledge, then tolerance of others is fostered, and knowledge is reached through diverse means.

I have been fortunate to be trusted as a student. My favorite professor and advisor at Wesleyan, Vera Schwarcz, a brilliant scholar of Chinese history and language, was perhaps the great formal educator in my life. One concept that I found particularly appealing in my study of Chinese history and culture is *xin*,

meaning heart-mind in Chinese and signifying a unity of mind, emotion and body that has far reaching implications in Chinese medicine and philosophy. I realized that I loved this professor's classes because we learned together with our xin, responding to each other's narratives and ideas in a fluid and personal way. In class we asked questions, and made connections to our own stories, so that the history of China became a way to make deeper and more personal meaning. I was able to write a poem about the Cultural Revolution for one assignment and write my final essay on the intersections between traditional Chinese Medicine and my own experience with illness. She trusted me to learn through my own unique, meandering path. Meaningful learning is personal and highly differentiated; and learners must be trusted enough to learn in their own way, whether through creative processes such as poetry, and exploration of a personal experience, through questioning or partnering with others. So too, for our reading responses, she encouraged us to draw on personal experience, trusting that we would still read closely and with a critical eye. That we were invited to simply respond demonstrated trust enough, and it is rare that we allow children the freedom to simply respond absent leading questions buried in information or instructions.

As a teacher, I strive to impart this sense of being trusted to my students through an openness to their *xin*, to the complex web of emotions, queries and imaginings that makes up the self. Admittedly, it is easier outside of the class, when I'm in a natural setting, and I can allow the students to search for things that they find intriguing until we organically come to some sort of focus. No matter where I am, as much as is feasible, when a child asks me a question, I respond by asking, "What do you think?" So often, students ask questions for reinforcement of their own ideas, or at least of their own inklings of ideas. In responding this way, I hope to communicate that I trust them to construct their own meaning, and still come to an "acceptable" conclusion. Institutionally, museums may choose to foster an atmosphere of trust through exhibit design, inquiry based programming or designated areas for messier, exploratory learning. Places such as the Discovery Room at the American Museum of Natural History and the Discovery Garden at the Brooklyn Botanic Gardens, in which students are encouraged to touch and smell and even garden in a setting specifically designed for children communi-

cates that the garden trusts and welcomes visitors to engage with and even care for the living displays.

Trust, however, requires courage, and many educators do not trust their students to independently or as a community come to understandings that they would find appropriate. Over the first few weeks of the school year, classroom teachers often drill the students on teacher created rules and routines. In their own words, “they don’t want chaos,” and perhaps believe deep down that by giving their students agency, they will find themselves mired deep within it.

No one wants chaos. Trust, however, does not necessitate an abdication of responsibility for the learner’s safety or learning experiences. Rather it entails a process of shared negotiation and an environment that encourages (en-courage, emphasis on the courage) students to have confidence in their own inklings and imaginations. Based on my own experiences, I am inclined to believe that the more trust I convey to my students, the more they will live up to and exceed my expectations. Even so, it takes courage to abandon one’s “fear of speculation” (Greene 2001, p.126), and trust one’s students to construct meanings that correspond to ones’ own goals and values as an educator. For many people, it requires extra courage to trust young children, who for some appear too wiggly and impulsive to safely construct meaning with their own hearts and minds. Perhaps this is why young children are frequently discouraged and sometimes even barred from certain museums, due to a Gilmanesque belief that children cannot comprehend the value, fragility or meaning of art objects and consequently cannot be trusted to learn from them appropriately. However, in a relationship founded upon trust, there is always an opportunity to revisit, to communicate one’s intentions honestly and listen anew so that in time, students and teachers should be able come to mutual understandings of reality, and most children should and can exceed such paltry expectations.

It was perhaps with this courage and participation in the construction of the meaning in mind that Freire (1998) speaks of the educator’s capacity for “struggle.” So too, Burnham (2005) speaks of the “educator’s openness to change”(p.73), another quality that requires considerable courage on the part of educators. We ask our students and visitors to expand and revise their thinking often based on

as little as our word. We have stressed throughout this book, that it seems to us only fair that educators in turn have the humility and flexibility to welcome the possibility of change in their own thinking, and to trust students enough to listen to what they communicate.

To be a progressive educator, according to Freire, (1998) one must possess “a generous loving heart, respect for others, tolerance, humility, a joyful disposition, love of life, openness to what is new, a disposition to welcome change, perseverance in the struggle, a refusal of determinism, a spirit of hope, and openness to justice…” (p.110).

There are many characteristics one might add to this list, including empathy, creativity and joy in process. Trust, however, underlies the educator’s ability to share these qualities with learners, fully and without reservations. We have noted how both Greene and Burnham see museums as places of alternatives, where students are free to speculate and dream without reprisal. Perhaps however, it is not the setting that provides the alternative, but the feeling that pervades it. Is it a place where learners are trusted to formulate their own ideas, or is it a place where learners are excluded from the process of making meaning by a need to control, a fear of the unpredictable and the primacy of information? In this book, we have argued that both museums and schools must contend with these questions. In museums and in the classroom, it is trust that is the key, the trust that visitors and learners may approach a subject in different ways, that if prepared adequately, children will not uproot roses or charge at fragile antiques and that learners will be able to handle more open-ended thinking, and perhaps, even discover something new.

In any setting, learning is fundamentally a process of opening, of extending, discovering and wondering more than of consuming. It is a process of building layers upon layers of connections, never in isolation, but always with others, whether with a docent, a grandmother, other students, or a teacher. Education, as defined by all of these thinkers, is fundamentally enlarging and interactive. It must be inclusive, purposeful, experience based and respectful of children and how they negotiate their world.

As museums enter a new century, education has become adopted as a centerpiece of many museum mission statements. We feel museums are strongest when they incorporate the insights of educational theorists to provide a refuge, a place for exploration and discovery that unifies heart and mind and brings people and communities together. We hope that the reader of this book has found in the theorists we have explored together, that a museum becomes much more than a collection of archaic things, and in the words of Dewey, education becomes not a name or slogan, but a reality (1938, p.91).

References

Burnham, Rika and Elliot Kai-Kee. (2005). “The art of teaching in the museum.” Journal of Aesthetic education, Vol 39, No. 1, Spring.

Greene, Maxine. (2001.) Variations on a blue guitar: The Lincoln Center Institute lectures on aesthetic education. The Lincoln Center Institute. Pp. 44-49, 116-121, 161-168.

Freire, P. (1998.) Pedagogy of freedom: Ethics, Democracy and Civic Courage. Rowman and Littlefield. In Chapter 4, knowing how to listen. Pp 101-112.

Hein, George E. (1991) The significance of Constructivism for Museum Education. Paper presented at the International Committee on Museum