

## **Where's Wonder?**

**Fred Burton**

Ashland University

### **Abstract**

After 36 years of working as a progressive educator in American schools, the author notes the near absence of joy, passion, and imagination that today's students experience. He asks, "Where's wonder?" In this essay, the author makes a case for the role of wonder in learning as he reflects on his work with schools and museum educators at the Columbus Museum of Art's Center for Creativity. After sharing his own perspectives on wonder, he further explores and frames the idea by reconsidering two concepts from two major philosophers and practitioners of progressive education: 1) the late progressive philosopher and physicist David Hawkins and 2) educator Eleanor Duckworth. Drawing inspiration from the preschools of Reggio Emilia, the author then makes a special case for wonder as a group endeavor that contributes to something larger than the individual.

**Keywords:** role of play in education; progressive education history; arts in education

\* Fred Burton has been a progressive educator for 36 years. He worked as an elementary school teacher in public progressive schools in Wyoming and Ohio and was the principal of Wickliffe Progressive Elementary School in Upper Arlington, Ohio for 13 years. For the past four years he has been a fellow and faculty member at the Project Zero Classroom Summer Institute in the Harvard Graduate School of Education. Dr. Burton is currently an associate professor in early childhood education at Ashland University and serves as the Visiting Education Scholar at the Columbus Museum of Art. His teaching and consultant work centers on the role that creativity, thinking, and the arts play in schools and museums.

*Stand aside for a while and leave room for learning, observe carefully what children do, and then, if you have understood well, perhaps teaching will be different from before.*

Loris Malaguzzi  
*The Hundred Languages of Children* (Edwards, 1988)

*At a large state university, undergraduate students completing their Bachelor of Fine Arts degree are enrolled in their final class, a senior seminar in painting. They are painting in the classroom and several appear hesitant. With little success, the instructor has spent much of the semester encouraging them to be more playful and to take risks as artists. While in the process of painting, more than one student asks, "Can I do this?" and "Do you want this?" Others have looks of frustration and annoyance on their faces when the instructor invites them to use the materials to explore some of their ideas.*

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*On a special day devoted to celebrating reading in an elementary school, an adult is invited to be a guest reader to a third grade classroom. Upon finishing reading aloud Tomie DePaola's (1996) retelling of an old folktale, *Strega Nona*, a somewhat shy, quiet girl walks over to the adult and thanks him because last year her teacher said they were too old to be read aloud make believe stories.*

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*On a school field trip to a museum of art, a group of fifth graders are following a docent who has brought them face to face with a painting that is filled with color and emotion. The docent asks them to share what they see, think, and wonder about as they peruse the painting. They excitedly raise their hands and offer up comments like "Wow, look at the swirls!" "It makes me think of my crazy bedroom," and "I wonder if the artist was lonely?" Before others can speak, the teacher who has been following this particular group, steps in, asks for quiet, and redirects the children's attention as she begins to "explain" the painting.*

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*A university researcher designs an elaborate qualitative study of curiosity in schools that are well funded and not overcrowded. The study seeks to compare the manner in which children's level of curiosity differs, how the classroom physical environment elicits more or less interest and curiosity, and to understand how classrooms within and across schools compare in their level of curiosity. The study was unable to meet any of these objectives because there was such an "astonishingly low rate of curiosity in all of the classrooms" (Engle, 2011).*

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As a progressive educator for the past 36 years, I have intentionally spent my time, often simultaneously, in both elementary schools and at the university. In my best moments, I have learned many things from classroom teachers, children, parents, and university professors, especially where and when these lived theoretical and practical worlds converge. But through the years, I'm also finding disheartening examples of teaching and learning like the ones above. I'm guessing readers of this essay who spend time in schools could point to their own examples. These dismal anecdotes may come a little too easily and although they may evoke a feeling of anger or dismay, it is rare that they completely and utterly surprise us.

So, as I reflect on education today, I would like to pause for a moment and consider the following question: “Where’s wonder?”

### Wondering About Wonder

Rather than spend time in a detailed deconstruction of wonder itself, I simply want to ruminate about it and invite you to do so too. That said, when I think of wonder I associate it with being amazed, perplexed, imaginative, creative, losing track of time, or what Czikszentmihalyi (1996) calls “flow.” I also think of wonder as various states of the mind and heart. Happiness, joy, and delight are some of the more obvious emotional side effects of wonder. But so are being annoyed or overwhelmed in both good and bad ways (e.g., seeing the Grand Canyon for the first time or the horrific amazement in the moment right before witnessing an automobile accident about to happen). When I think of wonder I also think of “educere,” the Latin root word of education meaning to “draw out.” While I believe that you can’t normally pre-plan, prescribe, and complete a traditional lesson plan for wonder (e.g., “upon completing this activity all children will have an 85% understanding of wonder”), I do think you can create the *conditions* for it.

Perhaps wonder is a bit like “good art.” We may not always be able to articulate why it is good with precision, but we know it when we see it. For example, in the photo below, there are two images of four-year-old Greta as she makes “circles” and “letters.” After each mark on her paper, she sits back, looks at her work, laughs, and has a wondrous look on her face as she leans back to delight in her work.



Photo Credit: Annie Pribonic

Even if we were completely unfamiliar with what Greta was doing, chances are we would still be able to ascertain that something wondrous was happening. So wonder may not only be an internal state of the mind and heart, but something made visible by children and adults, something we can visually read and recognize.

Sean Foley is a painter. I would also call him a philosopher, but he would deny this. The subject of his work as an artist often centers on states of wonder such as the fantastic, the mysterious, and the horrific. He had this to say about wonder during one of our recent conversations over lunch:

It is the inexplicable, a place between the known and unknown...a place where initially, language fails us like when we first saw planes flying into the Twin Towers on September 11th. Or for example, when looking at the sketches of faces done by various artists. In some of their sketches we see that the looks on people's faces during moments of horror and wonder are the same. It's a time that the brain can't quite compute what is happening. It doesn't know yet what it doesn't understand. And it is incredibly important. It's a split second of purity, not quite knowing or thinking. It is how we encounter works of art. There is a beauty to being wrong in suspense and in doubt.

Many of those I work alongside of in education would respond that they do not see or have the time for the "beauty" of being wrong or the "purity" of not knowing. I suspect that those of us in close contact with teachers, parents, and policy makers wouldn't be surprised if they thought of these ideas as crazy talk. But don't we in society need artists and art for just that reason? To illustrate this, one need only think of Jules Verne, the French author whose novels of science fiction featured underwater travel and flying through space *prior* to the inventions that allow us to do these things today.

Artists, like most of us who are trying to learn or understand something, do so by making sense of lived experience. Yet, wondering isn't just making sense of lived experience; it is lived experience. Like art making, wonder just may have value in and of itself. And also like creating art, there is a good deal of rigor involved on both the student and the teacher's part. Wonder requires us to draw on thinking dispositions such as observing closely, living with ambiguity, perseverance, and being curious. Wonder is both a noun (e.g., the feeling of being surprised) and a verb (e.g., to think curiously). However, both forms of speech are interrelated and wouldn't you agree that we could use a lot more of either or both in education today?

### **Progressive Provocateurs of Wonder**

Regardless of whether we think of wonder as a noun or verb or whether we simply intuitively know it when we see it, let us consider for a moment what it looks like in practice and how it might serve both individuals and a larger community of learners. In doing so, I would like to briefly share two interrelated ideas of two progressive educators: David Hawkins and Eleanor Duckworth.

#### **David Hawkins: "Messing About"**

The late David Hawkins was, among other things, a philosopher, a MacArthur Foundation "genius grant" winner, a Dewey scholar and someone who was fascinated by how young children learned, especially when it came to science. In the late 1970s, I first met him and his wife, Frances (a teacher) while participating in a series of professional development workshops held at the Mountain View Center in Boulder, Colorado. As a first year teacher who had just moved from Ohio to Wyoming to begin my career, I was familiar with some of Hawkins's ideas through reading his essays in Charles Silberman's book, *The Open Classroom Reader* (1973) as well as from my undergraduate teacher training at Ohio State University which had a year-long program for pre-service teachers that was completely devoted to the "informal classrooms" of the British Primary school. I was also an avid reader of the educational journal *Outlook*<sup>1</sup> that featured writers like Hawkins.

In February of 1965, Hawkins wrote an article entitled “Messing About in Science” which was published by the journal, *Science and Children*, and has been reproduced in various places including in his book called *The Informed Vision: Essays on Learning and Human Nature* (2002). In this article, Hawkins, observing that his university students often struggled with understanding astronomy, found it useful to devote time to having them play with scientific ideas, concepts, and materials, a time he thought of as “Kindergarten Revisited” (2002, p. 67). He realized that taking time to play proved to be time well spent in regards to their understanding of physics.

Hawkins became a member of the Elementary Science Study (ESS), a curriculum development initiative funded by the National Science Foundation. The ESS project brought children, PK-12 teachers, and university professors together to design science curriculum materials for young children.<sup>2</sup> For two years he closely studied children’s science learning and used the phrase “messing about,” (Hawkins, 1965) as an important phase of playing with laboratory materials.

Hawkins thought that characterizing messing about as “unstructured” was misleading for it suggested to some a chaotic classroom at best or at worst, a waste of time. Instead, he believed that time invested in messing about was important intellectual work in which materials and equipment (e.g. pendulums) could be explored in order to “construct, test, probe, and experiment without superimposed questions or instructions” (Hawkins, 2002, p.68). Through his observations of children and deliberation with colleagues working on the ESS project, Hawkins determined that messing about for long periods of time was essential for: 1) allowing children to build background knowledge and generate questions, puzzles, and ideas through engagement with materials and the diverse perspectives of others that predictably surface while working together; 2) honoring that children, before entering formal schooling, also bring a set of prior knowledge to the school with them; and 3) cultivating the development of individual dispositions of rigorous, disciplined observation, perseverance and exploration which he viewed as the “essence of creativity.” (2002, p. 71).

As a young teacher I found Hawkins’s notion of messing about an exciting way to promote the intellectual development of students, but I also understood that the teachers and administrators I worked with were uncomfortable with the notion that children would have the power to direct their own learning to a significant degree. As teachers and administrators we agreed that we were responsible for managing classroom behavior *and* teaching the curriculum. Unfortunately, over time the idea of classroom control and teaching the curriculum came to be viewed by teachers and administrators as a singular concept: *controlling the curriculum*. Hawkins’s idea of messing about challenges this all too prevalent adult-centered conception of teaching and learning where it appears there is little room for wonder. Yet, for many progressive teachers in the open classroom of the 1960s and early 1970s, it came as little surprise that children who were allowed to explore materials, wonder about the way things work, generate questions, be perplexed by emergent puzzles, and encouraged to follow their interest, time for wonder and messing about were indispensable springboards to teaching, learning, and emergent curriculum opportunities.

As Hawkins observed children messing about with pendulums at ESS, he noted that, “In spite of or because of! - this lack of direction, these fifth-graders became very familiar with pendulums. They verified the conditions of motion in many ways, exploring differences in length and amplitude, using different sorts of bobs, bobs in clusters, and strings, etc. And have you tried the underwater pendulum? They did!” There were many discoveries made...” (2002, p. 70). He understood that devoting time (not just at the beginning of an inquiry, but at other stages of the process as well) to messing about allowed children to dig deeper into content. He believed such time was critical to not only covering the curriculum, but also “uncovering” it. Finally, he knew that “all of us must cross the line between ignorance and

insight many times before we truly understand” and that messing about was an essential phase of instruction that allowed us to “cross that line, over and over” (Hawkins, 2002, p. 70). Hawkins knew that wondering and possessing a sense of wonder was a conduit to deepening our understanding of content as well as children themselves.

### **Eleanor Duckworth: “The Having of Wonderful Ideas”**

Eleanor Duckworth, a former student and a translator of Jean Piaget’s work, is perhaps today best known and respected as a progressive teacher, researcher, developer of curriculum and science educator. She is also an astute and articulate observer of children and adults who are engaged in thinking and inquiry. Like Hawkins, she was also associated with the Elementary Science Study curriculum reform group where she served as a staff member. While working on the ESS project, Duckworth experienced a bit of her own cognitive dissonance. She had studied the classic Piagetian experiments of children’s abilities to conserve, classify, and seriate, but was uncertain whether or not these ideas could be helpful in the day to day life and experience of actual classrooms.

While Duckworth carried with her a strong Piagetian theoretical framework, her most startling insights about the nature of wonder came through actually observing and teaching children in classrooms, what she called “the difficult part” which in her view meant “finding ways to interest children, to take into account different children’s interests and abilities” (1972, p. 220). For Duckworth, the having of wonderful ideas meant observing children and giving them multiple experiences in “testing out ideas that she or he finds significant” and that such opportunities become the “essence of intellectual development” (1972, p. 230). If those of us who teach in university settings or K-12 schools would, like Duckworth, consider our student interests and abilities as a *starting point*, perhaps there would be more wonder in our classrooms. Our conception of teaching might be viewed less as telling and more of what Reggio *pedagoga* Carlina Rinaldi calls the “pedagogy of relationships and listening” (Project Zero, 2001, p. 79).

Duckworth saw teacher acceptance of children’s ideas as one key to promoting the sort of generative play that creates the conditions for the having of wonderful ideas. Along with acceptance, however, Duckworth noted that a teacher also needed a skill or disposition to nurture a sense of wonder in children. In working with children, Duckworth acknowledged that she (and many of her fellow teachers) “had a certain skill in being able to watch and listen to children and figure out how they were really seeing a problem” (1972, p. 220). Notice her use of the word “problem” in the previous sentence. Wonder and genuine inquiry often start with a problem and while many of these problems are self-contained within a discipline, they may also originate from something larger than the individual such as an interest in social justice within and beyond the immediate classroom.

In order to cultivate wondering that has both depth and breadth, Duckworth believes teachers should not only be ready to accept children’s ideas, but to do so with the express purpose of raising “questions that made sense to them and to think of a new orientation for activities which might correspond better to their way of seeing things” (1972, p. 220). Of course, to effectively accept children’s perspectives, we would do well to ponder and surface our own. For example, today we might ask how our own evolving ideas of justice, race, and a virtuous society affect our pedagogical response to children’s conceptions of these same ideas. As a teacher, how am I, in Duckworth’s words (1972, p. 224), “providing a setting which suggests wonderful ideas to children -- *different* (italics mine) ideas to different children -- as they get caught up in intellectual problems that are real to them?”

Of course, all of this takes time. This advice to make time to observe and try to understand how children are viewing a problem may seem utterly impossible and foreign

when considering how we approach pedagogy today. As teachers, we are so accustomed to moving children through various standards, the curriculum, or the university syllabus instead of making time to probe the depths of disciplinary content or pursue generative questions from students be they young children or adults. Even if the thought of making time for wonder doesn't seem foreign to us, it most likely will at least seem daunting. In fact, at this point, I can imagine a teacher asking, "Do I really have time to do this?" The short and somewhat glib answer is "no." In my own work with teachers, I am not hearing them say "Fred, we have way too much time, can you help us use it?" Furthermore, most parents I know are experiencing the press of time as well. However, acknowledging this tension does not change the convenient delusion of thinking we can race through material (or the syllabus) and pretend that deep learning will result. As Pat Carini, co-founder of the Prospect School, once told me, "speed is the enemy of quality."<sup>3</sup> I wish it weren't so.

### Wondering in Packs

There is no need to assume that only individuals engage in these problems. I would now like to close by suggesting that the value of wondering goes beyond something that only benefits the individual. Sean Foley, the painter-philosopher I referred to earlier, sees wonder "as the gateway drug to learning" and from our brief examination of progressive provocateurs, the case for making time for wonder can be found in the work of Hawkins and Duckworth as well. However, I would like to add here that I believe that for wonder to reach its highest expression and deepest potential, it is best done in groups. Here in the United States we have elevated and overstated the role of individualism. It is part of our historical narrative and myth. The rights of the individual in familiar cases such as carrying guns, taxation, and health care often supersede considerations of what is best for the larger group. Thinking of the group does not come naturally to many of us. Consequently, I do not want to understate the social and educational value of wondering *together*.

When thinking about wondering together, we have many things to learn from the Italian preschools of Reggio Emilia. One thing of value that we may take from Reggio educators is that if wonder is to lead to some sort of growth, be it individual or social, it is best done in the presence of others. As a participant at the Reggio Institute and an observer of their schools in Italy, I was especially struck by how often we in the United States falsely assume that the individual and group are two distinctly divided (and divisive) entities. In addition to separating the two in our minds, we often believe that placing them together may have a negative, or to use Dewey's terminology, a "miseducative" effect (Dewey, 1938).

For example, as a former principal of an elementary school whose classrooms were organized in multiage age units (e.g. first and second graders together in one class), I recall having had numerous conversations with parents who were concerned that their child in second grade would be academically "pulled down" by the mere fact of being around and having classmates in the first grade. Despite these misgivings, it is misguided to frame wonder (or learning) in an either/or fashion i.e., either it benefits the individual *or* contributes to the group, but never both at once. Steve Seidel, the former Director of Harvard's Project Zero, a research group that has developed a collaborative, working relationship with Reggio educators over the years, says it poetically when he writes that: "...the individual may be best served by frequent opportunities to be part of intentional, purposeful, learning groups. It is possible to see the group as holding the individual in its arms with care, respect, and love rather than as some large and cold container in which the individual's rights, needs, and identity are inevitably lost and which crushes the spirit of the individual" (Project Zero, 2001, p. 313).

As individuals see, think, and wonder about the group's thinking made visible, there is a potential to provoke further learning and inquiry that is cognitive, social, and ethical.

Consequently, when considering the power of wonder, we should speak of individual *and* group learning rather than individual *or* group learning.

### **Following Wonder**

A reasonable question that teachers and administrators sometimes ask is: “What comes after wonder?” More specifically, what might a teacher, parent, or museum docent *do* with wonder? My initial response is “nothing” since I believe in the value and motivational power of the experience itself. However, as an educator, I understand and agree with the desire to build on wonder as an opportunity to promote deeper understanding and to raise new questions that create additional pathways leading to further learning. Those who have created the conditions of wonder can perhaps best extend it by “stressing dialogic skill” (Easley, 1990). After all, conversation is the main currency of our profession. Drawing on science education, Easley provides us with examples of extending wonder by creating conversations through “peer group dialogues.” In these dialogues the teacher listens closely to children’s ideas, serves as moderator that actively seeks out alternative perspectives, and at times draws on a “little dramatization, playing the devil’s advocate, or other theatrics” in order to spur on the building of ideas through discussion (Easley, 1990, p.85). It is through such conversational learning communities that we may move from wonder and begin co-constructing important conceptual understandings together.

### **Finding Wonder in Museums, Schools, and Relationships**

I am not a cynic. Although I began this essay with some pretty disheartening anecdotes about the prospects of wonder in formal and informal educational settings, I would like to end by sharing some examples of hope. They are examples of people in places who appear to be resisting the larger systemic forces that tend to take the “life” out of lived experiences. After sharing examples from a school and a museum, I will close with an observation of a father and his young son who I observed wondering together in a museum.

#### **Wonder...in Museums**

After a great deal of deliberation, gritty fundraising, and an inspiring vision, the Columbus Museum of Art (CMA) in Columbus, Ohio completed an ambitious renovation that dedicated over one fifth of its space to opening a Center for Creativity where wonder is valued, promoted, and made visible.

*As part of their training and education, a group of twelve medical students from Ohio State University stand in front of a painting. Rachel, a staff member from the museum, poses questions for them as they look at one painting for forty-five minutes. After spending time sharing their close observations regarding what they think they see, they begin to wonder together about what they would ask the artist to find out more. They ponder the vibrant colors and shapes and then reflect together on the significance and relationship to their own interpretations as well as those emerging collectively in the deliberations of the group. They walk away surprised and delighted that their group “thought ramblings” have yielded new insights that they as individuals had not noticed. They share that the experience has encouraged deeper, attentive looking, critical thinking, and developed their capacity for empathy.*

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#### **Wonder...in Schools**

Columbus Collegiate Academy is an urban middle school located in a part of the city characterized by high poverty and crime. The school places a high value on wondering about the world.

*At Columbus Collegiate Academy teachers are collaborating with Emily, a Columbus Museum of Art education staff member. Their focus is to explore social issues that matter to students through creative experimentation and as Emily says, "individual and group wondering." In a small, crowded classroom, Emily and the teacher are having a discussion with seventh graders. Four weeks earlier, Emily had brought several socially charged works of art from the museum's collection with her. The students have not only spent time wondering about the art itself, but after small group conversations, have made connections to their lives situated in their community -- poverty, homicide, abortion, and suicide, are all topics generated by the students. Today, they are reflecting on their own works of art in an exhibition that they have created around the various issues that are critical to them. Students reflect and think aloud about each other's chosen social issue as expressed through artwork that they have made. One boy, Wendell, keeps walking back and forth between three different student prints that represent three separate issues -- drugs...abortion...homicide. Suddenly, his face turns from perplexed to pleased. He looks at his friends and says, "Hey, people in our community might do drugs at a young age which could lead them to make bad choices like having an abortion and that would make some people mad because they see that as homicide. Another boy understanding the connection Wendell has just made says with some admiration, "sweeeet." Another student remarks to Emily "I think I understand how someone else feels about a social issue and that if you care about something, you can stand up and do something about it." Emily smiles and says to me, "Creativity and wonder do not exist in a right and wrong world; it is in the beautiful and interesting gray areas."*

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### **Parents Wondering With Children**

Occasionally, I use the museum for what I call an "artful loitering tour." On this self-guided tour I simply go to the museum with no specific purpose in mind and wander around to see what strikes me. Something always does. On one of my tours I observed a father with his four-year-old son in a room of art and art materials called the Wonder Room. It's a space at the Columbus Museum of Art specifically designed so that adults and children can play with materials and ideas together. In this room, the father and son are standing in silence gazing at an assemblage of metal objects attached to a magnetized wall. They were at the beginning stage of creating a creature of some sort using one of the large metal, magnetized heads in the room.

After scanning over the objects for some time, the young boy excitedly said, "I know, let's make the eyes with this." The "this" was a large, single piece of metal with a 30 milliliter spoon on one end and a 15 milliliter spoon on the other. As his father watched, the boy attached the measuring spoon to the head. The boy then stepped back, looked at what he had done, and seemed somewhat puzzled, noticing that the different sized measuring spoons had resulted in eyes that were not the same size. Next, with a matter-of-fact tone in his voice, the boy turns to his father and says, "It's OK, they're not like my eyes, but we're making this up, aren't we Daddy?" To which the father promptly replied, "Yep, we're dreaming this up together."

The two of them, together, continued to "dream" and make up various faces. You have to appreciate what they were doing on many levels. They were collaborating, making connections to themselves and the world (i.e., eyes are mostly the same size), using flexible thinking (but eyes don't have to be!), stepping back and reflecting on their work, and formulating new plans together. However, what most impressed and inspired me was that they were taking their time. No rush. No preconceived notions of making things the right way. They were simultaneously engaged, relaxed, and perplexed at times. Just "messaging about" together. Valuing each other and the work they were doing.

Parker Palmer writes that “teaching tugs at the heart, opens the heart, even breaks the heart -- and the more one loves teaching, the more heartbreaking it can be” (1998, p. 11). In the act of asking “Where’s wonder?” our attention is directed to finding it or even imagining it in small pedagogical spaces. And it is in such spaces that we may fill the hearts of children, teachers, and schools with some desperately needed passion, joy, and imagination.

### Notes

<sup>1</sup> Although no longer in print, almost all of the issues of *Outlook* can now be found on the The Hawkins Center website, (<http://hawkinscenters.org>).

<sup>2</sup> This idea of bringing children, teachers from all levels, and university professors together to develop curriculum sounds somewhat odd today since politicians, special interest groups, and corporations appear to have as much influence on the curriculum development process as teachers.

<sup>3</sup> This was a personal conversation during her visit to Wickliffe Elementary School.

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