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The Having of Wonderful Ideas - The virtues of not knowing

Elanor Duckworth was once asked to distinguish between passive and nonpassive intellectual virtues. Sounds like a pretty dry exercise. What must *passive* virtues be? "Knowing the right answer," Duckworth believes, must be the most passive intellectual virtue. She then relates two inspiring anecdotes about children *not* knowing the right answer. Duckworth ends by confronting the demon of standardized tests: "it would make a significant difference to the cause of intelligent thought, in general, if teachers were encouraged to focus on the virtues involved in not knowing." What does she mean?

In most classrooms, it is the quick, right answer that is appreciated. Knowledge of the answer ahead of time is more valued, on the whole, than ways of figuring it out. Knowing the right answer requires no decisions, carries no risks, makes no demands. It is automatic. It is thoughtless. [...] It is a virtue—there is no debate about that—but in conventional views of intelligence, it tends to be given far too much weight.

Duckworth then attends to "what is involved when the right answer is not already known." First, she describes some wonderful exchanges—experiments, they were called—with children in Europe carried out by Barbel Inhelder, a collaborator with the innovative epistemologist, Jean Piaget. Inhelder used a clever device which allowed a child to move an amount of liquid between containers of differing widths. The children were first allowed to move a given amount through the containers to see how the levels changed. Then they were asked to make some predictions and play them out. "That's really funny!" "It looks like too much, doesn't it?" "I know, it's like last time!" "How come?" "Wait! I know. All the time it's still less on that side..." Duckworth summarizes the work of this 6-year-old child: "Surprise, puzzlement, struggle, excitement, anticipation, and dawning certainty—those are the matters of intelligent thought. As virtues, they stand by themselves. Even if they don't, on some specific occasion, lead to the right answers. In the long run, they are what count."

The work the child went through above is what "constructivist" educators mean when they say that children construct their own knowledge. By manipulating materials, they find discrepancies between what their mind holds and the actual world. They struggle to reconcile the two, driven by their own internal desire to understand their world. In the end, the individual child knows a simple thing more deeply. Along the way, they experience what I call "fun," and what the physicist Richard Feynman called "the pleasure of finding things out."

Then, Duckworth gets more deeply into the matter.

In a story about a star 10-year-old student exploring a pendulum with focus and verve while his classmates perfunctorily go through the exercise, a conflict develops when the student mistakenly predicts, with confidence, that the pendulum need not slow down to turn around. The teacher says nothing as the class

watches a film-loop of a pendulum draining sand from its bob as it swings. Eventually, a classmate speaks up to say that that idea doesn't make sense if the sand piles up at the ends instead of in the middle. The star pupil holds his view as more students point out problems. Finally, he concedes, quietly.

In less able hands, this might be a parable of overconfidence and simple common sense. Think of the movies in which some know-it-all gets his comeuppance. Here's what Duckworth says: "The class played out in public view the virtues concerned with courage, confidence, caution, and risk." Who played what role?—what do you think?

"The courage to submit an idea of one's own to someone else's scrutiny is a virtue in itself—unrelated to the rightness of the idea." Alec, the star student, was wrong—though confident. It might seem like egotism, but as Duckworth points out, his first try and his defense was what allowed the intellectual case to build to where everyone agreed that the pendulum must slow down. The evidence demanded it. Theory demanded it. "The other children were right, but they would never have arrived at the right idea if they had not taken the risk—both with themselves and in public—to question Alec's idea." In adults, this is what we call scholarship, academia.

And what about the teacher? What did she do?

But think back about Duckworth's ending idea. Standardized tests focus on the virtue of knowing the right answer. Even if a child has to figure out the right answer, the intellectual virtues illustrated above are not used, not tested, not seen, not valued. And they may just waste time. The students in this class got the right answer; however, the teacher spent a lot of class time letting them get there. This is an intellectual atmosphere. It requires that Duckworth's virtues of not knowing be given ample time in class along with the more passive virtue, easily tested, of knowing the right answer.

POSTED BY MICHAEL GARRETT AT 10:08 PM

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