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Profiling Scholars of Creativity: Practicing the Process with Dr. Michele Root-Bernstein

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There's a problem with the term creativity… it's got all these preconceived notions, and prejudices and wishful thinking attached to it… we're trying to understand this huge ball of stuff — Michele Root-Bernstein (personal communication).

Playing with distinctions, boundaries, unassailable truths, and the limits of utility is, in fact, what many of the most innovative people in all disciplines do — Robert and Michele Root-Bernstein in Sparks of Genius (1999, p. 255).

Over the past few years, we (the Deep-Play Research Group) have been writing an ongoing series under the broad rubric of "Rethinking Technology and Creativity in the 21st Century." We have covered a lot of ground in these articles, around issues related to defining and measuring creativity, teaching creatively with technology and transdisciplinary thinking. We begin a new phase for with this article. Each article for the foreseeable future will focus on interviews with renowned scholars of creativity. Our goal is to make the work of these scholars more accessible and to connect their work to the themes that underlie this series. We begin these conversations

with independent scholar and writer Dr. Michele Root-Bernstein.

Dr. Michele Root-Bernstein studies creative imagination across the arts and sciences. Her most recent book, *Inventing Imaginary Worlds, From Childhood Play to Adult Creativity Across the Arts and Sciences* was featured in our examination of *deep play,* or *transformational play,* as a habit of mind particularly conducive to creativity (Henriksen et al. 2015). Currently an adjunct faculty member at Michigan State University, Michele has been involved in varied strands of interdisciplinary research investigating connections between arts practice, innovation, and economic development. With Robert Root-Bernstein, she is co-author of numerous scholarly and popular articles on imaginative thinking, polymathy, and creative education. Important to the direction of our own research and interests, Michele and Robert co-authored *Sparks of Genius, The Thirteen Thinking Tools of the World's Most Creative People*, from which Mishra et al. (2011) developed the seven transdisciplinary habits of mind that we previously covered in this series.

In addition to her scholarship, Michele has been engaging in creative activity as well, writing and publishing haiku in journals since 2005. A selection of her poetry appears in *A New Resonance 6, Emerging Voices in English-Language Haiku*. A handful of her pieces have won recognition in haiku arts contests; in 2013 one of her poems was nominated for the Pushcart Prize. She served as associate editor of *Frogpond*, the journal of the Haiku Society of America, from 2012 through 2015. As a teaching artist affiliated with the John F. Kennedy Center's Partners in Education Program, she also co-presents a haiku/dance workshop utilizing imaginative thinking tools described in *Sparks of Genius*.

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During the course of this interview, our conversation ranged over a number of topics related to the practicing of creativity. Following are some the key themes she emphasized as we discussed creativity, its challenges, how it can be developed, and the implications that technology can have on that process.

What is Creativity?

A well-known challenge in the field of creativity is its many differing academic and colloquial conceptions. Michele explained part of its "unwieldiness" arises from this disconnect where "a person on the street is going to understand it one way, a scholar will understand it in a different way … it's really hard to tame." This lack of consensus on where to find and examine creativity led Michele and her husband and co-author, Robert Root-Bernstein, (the other party in her references to "we") to suggest, "It's useful to try and stay away from the use of creativity as a noun. Because it's just too slippery – we try to keep it adjectival."

An additional challenge is the difficulty of untangling creativity from many other related ideas which make up, as she puts it, a "huge ball of stuff," complicating our ability to distinguish the component parts of creativity. By referring to "creative behavior" or "imaginative thinking" it becomes easier to distinguish between different strands of what people identify as "creativity" and see how these pieces are both integrated and different. Specifying the terminology and the contexts helps to make these subtle, and sometimes not-so-subtle, distinctions more clear.

It is this identification of the many moving pieces which influence creativity that has led to Michele's focus on the creative individual; exploring the confluence of factors that enable people to make discoveries or develop particularly novel and effective solutions. Michele elaborated on this focus by asking, "If we understand enough of those [factors influencing creativity], can we then make some general principles of what's necessary or conditions that might create conditions for this to happen?" Unpacking this idea of factors and common practices inspired the creative thinking skills introduced in her co-authored book, *Sparks of Genius*. Examining the strategies that creative individuals use to help them combine fields and techniques, resulting in creative output, is an example of "letting the problem dictate what needs to be learned", as explained by Michelle.

This idea that creativity tends to involve the combination of different domains, that people see their expertise as connected and skills as transdisciplinary, is a key characteristic of how Michele understands the problem-driven nature of creativity. Michele spoke about polymaths, people who are knowledgeable and successful across multiple fields, and are motivated to do so because they have a compelling question that pulls them into different disciplines as a way of exploring that interest or problem. She explains, "there are a lot of people who have many interests, but they don't necessarily connect them. We think when people are problem-orientated, and they're connecting all of these things with their hobbies, personal interests, there's more likely to be movement of thinking across and within each area."

Skills and Strategies for the Creative Process

Creativity is not simply an inherent ability – it needs to be practiced and honed. Michele spoke about the development of creativity and the different strategies that can be used to exercise component skills of the creative process. Simply put: these are practices that must be practiced.

First, "a strategy to prime yourself for making a creative contribution in one field may be simply to always be *practicing being creative*, even just in your hobby." She explains that even if that practice results in a creativity that is more personal than observable to others, using those cognitive skills will develop your ability to be creative in professional work.

The second strategy Michele identified as useful for practicing creativity is *copying*. Although she recognizes that copying might initially seem antithetical to creating, and oppose calls for originality, she explained, "If you don't know how to do something, to think and put something together, then you can't be original. You have to go through the process of learning how to do so; the best way to do that is see how something else was put together." From there you can expand your imitations – closely at first – but in increasingly original and different ways, as you study and copy a variety of different people or products. With a variety of experiences and knowledge comes the ability to adapt that further and moves you from the work being copied toward producing your own, novel works.

Finally, Michele suggested *playing* as a strategy for developing creativity. Her book, *Inventing Imaginary Worlds* (Root-Bernstein 2014) is a close examination of the idea that the spontaneous and natural way children play can offer insight into how eventual public displays of creativity develop and mature. She emphasizes that playing certainly need not be only the privilege of the young. It is a strategy that both the Root-Bernsteins' and the researchers in the Deep-Play group consider essential. Playing allows for work and thought processes to shake traditional constraints, and become both fun and creative in an open-ended exploration of possibility.

Creativity in the Curriculum

This practice-based approach to training skills for creativity informed much of Michele's answer to our question about

how schools might effectively integrate creativity in the curriculum. "Arts are very practice-based, which makes a good case for arts being in the curriculum. That's one of the few places where our children can start exercising all these skills right away." Because there is often a content barrier in other subjects, students can be encouraged to *make* and *do* much sooner in art classes. This also pulls into how Michele understands the way that creative thinking skills transfer across fields.

Focusing on creative thinking encourages original thinking and meaning making – students are given permission to understand things with their own experience and perceptions. A challenge and opportunity for educators is the number of different possible answers or approaches that students might produce when given agency to think creatively. Michele joked about the *New Yorker* cartoon where a student says to his teacher, "I feel like you're limiting me to right answers." Her point that many problems often have multiple correct answers, even if they fall outside of the prescribed curriculum, is timely in an age of high-stakes testing and crammed content coverage. While traditional approaches to subject matter learning tend to stress a "right" answer—in truth, many complex real-world problems that 21st century workers will deal with may encounter a range of possible solutions and resolutions.

Following this point, we discussed how individual expression is more readily accepted in art than in science, though studies and discussions with some of the most innovative and high-achieving scientists reveal just as much stylistic flair is involved in scientific discoveries and solutions (Mehta et al. 2016; Root-Bernstein and Root-Bernstein 1999).

Describing a tension she sees between what *education* is for and what *creative education* is for, Michele explains "Part of education is to pass on what we already know, but if we don't also make sure there is some part of our education that trains students how to make new knowledge – how to take all that and go one step further, that's where we have a problem."

Teachers as Practitioners of Their Discipline and of Creativity

The theme of practice was prominent in our discussion about what creative education might most productively look like. Michele addressed the importance of having students solve authentic problems as an opportunity to connect the abstract with the concrete in each subject. For students, this provides time to make use of creative thinking skills while engaging with content in meaningful ways. This does require some insight from teachers, as she observed, "…from the outside, it seems to me the best teachers understand their discipline as practitioners. At some point they've practiced writing stories, or they've done lab work, or hunted down historical evidence: they have some idea of what an historian is doing, or what a

scientist is doing." Similarly, only by having experience practicing creativity will teachers be able to fully help their students develop into creative thinkers.

Michele offered two compelling reasons for why and how persisting in conscious and deliberate creative practice is useful. Beyond the obvious fact that your own ability to think creatively will improve, personally moving forward in the creative process makes it more likely that teachers are able to motivate their students to achieve the same. "The point is to understand what it means to do this"—to be creative, and through that, help students get excited about both the content and its potential for creative interaction.

Technology: Using it to Support, Not Suppress Creativity

As Michele discussed the intricacies of human creativity, we turned to considering the complexity of our relationship with technology as both a possible help and hindrance to creative potential. Michele discussed technologies as complex tools, and though she did not see them as fundamentally changing the creative process itself, she suggests that they have an impact on "what gets expressed and how it gets expressed."

Michele elaborated on the positive points, saying that technology can support the expression of creativity in speeding up creative processes (for example, composition on a computer versus by hand) and spoke of the potential of technology to widen participation. Referencing community online problem solving, data collection and similarly accessible group forums, Michele identified important democratizing trends that technology engenders by allowing creators to harness large-scale collaborations. Similarly, creators can use social media and other platforms to reach audiences without going through traditional gatekeepers.

Despite the potential of technologies to extend the reach of participation in creative processes, Michele also considers the flip side of the equation. She has concerns about it impeding the development of creativity in individuals. If children have computer games to explore imaginary worlds, there is no need for them to create their own play – they can simply consume. She noted, "If a child never has to make up their own games, I think they may miss out on a lot of playful creative practice." Using ready-made imaginary worlds can impose boundaries that cut off the ability to know you *can* create. Discussing instances of potential for creation, Michele mentioned Scratch, an online coding program that provides an opportunity to support the development of both creative practice and technological skills. Recognizing both the perennial generational alarm about the changing nature of play and the permanence of technology, she simply suggested increased awareness about the constraints of technology while appreciating its affordances.

Conclusion

Our conversation highlighted the importance of clearly defining and reflecting what we understand creativity to be, the need to commit to practicing these strategies ourselves as we encourage our students to do the same. It was both fun and enlightening to explore some of Michele's focuses in creativity a little more deeply and to discuss the different opportunities she sees for teaching creativity as a skill. Discussing the different opportunities to include creative thinking in the curriculum – through creation in both art technology – the importance of giving students an opportunity to play and practice creating is an important step toward developing a culture of creativity in our schools.

References

Henriksen, D., Keenan, S. F., Richardson, C., Mishra, P., & the Deep-Play Research Group. (2015). Play as a foundational thinking skill and trans-disciplinary habit of mind. *TechTrends, 59*(3), 5–10.

Mehta, R., Mishra, P., Henriksen, D., & the Deep-Play Research Group. (2016). Creativity in mathematics and beyond – learning from fields medal winners. *TechTrends, 59* (7). doi:10.1007/s11528-015-0011-6.

Mishra, P., Koehler, M. J., & Henriksen, D. (2011). The seven trans-disciplinary habits of mind: extending the TPACK framework towards 21st century learning. *Educational Technology, 51*, 22–28.

Root-Bernstein, M. (2014). *Inventing imaginary worlds: From childhood play to adult creativity across the arts and sciences*. Lanham: Rowman & Littlefield Education.

Root-Bernstein, R., & Root-Bernstein, M. (1999). *Sparks of genius: The 13 thinking tools of the world's most creative people*. New York: Houghton Mifflin.