



Creativity as a Sliding Maze: an Interview with Dr. James C. Kaufman

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Septimus: When we have found all the mysteries and lost all the meaning, we will be all alone, on an empty shore.

Thomasina: Then we will dance.

– Tom Stoppard’s *Arcadia*

We can’t live forever, but we can be remembered for an awfully long time, even if we’re not at the Big C level...Few people know who invented air conditioning

– that doesn’t mean we don’t appreciate the person.

– Dr. James C. Kaufman

Introduction

As our series of articles featuring creativity researchers has expanded, we continue to appreciate the wide range of conceptualizations and applications of creativity to teaching and learning. From thinking about creativity as “re-seeing,” or the concept of “flow,” to “un-creativity,” or seeing creativity as the basis of learning, each interview has expanded how and where we look at creativity, and to what ends. In this article we introduce the perspectives of Dr. James C. Kaufman, Professor of Educational Psychology in the Neag School of Education at the University of Connecticut.

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Dr. Kaufman grew up surrounded by psychology, the son of two psychologists, but was most passionate about creative writing. As he explains,

“Somewhere around my junior year I was sending out for grad school information, and one MFA school said, ‘Every year we give 20 MFAs, and every year there are 25 jobs in the entire country for people with MFAs. If you can do anything but this, do that other thing.’ And I thought — I can do something else. And it was right around that time I realized I wasn’t quite good enough to make it as a creative writer. I was good. I wasn’t great. I had no idea what to do next, but I figured psychology — okay!”

In the middle of obtaining his PhD with Dr. Robert Sternberg at Yale, Dr. Kaufman was able to combine these two interests by looking *at* creative writers.

He has since published more than 300 papers, and won many awards, including Mensa’s research award, the Torrance Award from the National Association for Gifted Children, and APA’s Berlyne and Farnsworth awards. He is well-known for his Four C Model of Creativity, a theory developed with Dr. Ron Beghetto (Kaufman and Beghetto 2009), and has gotten back to creative writing. He wrote the book and lyrics to the musical *Discovering Magenta*, which had its New York City premiere in 2015.

Why we should Care about Creativity

As Dr. Kaufman elaborated on the path that led him to the Neag School of Education at the University of Connecticut, he shared a pivotal moment that occurred while he was working at Educational Testing Services following graduate school. He recalled having an idea for how they could measure creativity, excitedly presenting it to a supervisor and being met with a “So what?”. Answering that *so what* question has advanced much of Dr. Kaufman’s work, as he explains, “I don’t think that creativity as a field does enough to make people care. We assume it’s important – it’s what we do! Other people don’t think that.”

One important reason that creativity matters to him is connected to the idea of fairness and equity among individuals and groups in society. As Dr. Kaufman explains,

If you look at IQ tests, standardized achievement tests, SATs, GREs, there are differences. And people can debate and argue as to why those exist. I tend to come down on the side of “these differences are artifacts of other things” as opposed to “these differences represent the truth.” But the issue is that these differences exist. If you look at the GRE and SATs, on the math men do better than women. If you look at ethnicity, majority cultures do better. Then you look at creativity tests—virtually any one. No differences. Everybody is potentially creative. If anything, some of the work on self-perceptions and on divergent thinking suggests that sometimes it's non-majority cultures who might have a slight advantage. Does this mean we should throw out the SATs? Of course not. But if we were to supplement the SATs to include creativity, we would increase fairness and equity in the admissions process.

When Dr. Kaufman's graduate school advisor, Dr. Sternberg, was Dean of the School of Arts and Sciences at Tufts University, he instituted a creative change to the admissions process: offering potential incoming students the opportunity to complete exercises that look at creativity and leadership potential. In addition to submitting their SATs, applicants might be asked to “write a short story to fit the title ‘Confessions of Middle School Bully’ or ‘The End of MTV.’ They could create an advertisement or ad campaign for a product that doesn't exist” (Jaschik 2006).

The SAT alone only offers a partial picture of what it takes to be successful in college and is most predictive for students already coming from families of higher social economic status. Sternberg's Kaleidoscope test helped expand entrance assessments to examine creativity, practicality, and wisdom (Sternberg 2010). By expanding what predictors they considered contributing to success, the admissions team at Tufts was enabled to invite a wider range of students; unlike the SATs or ACTs, the evaluations of these additional questions did not result in differences between ethnic groups.

Dr. Kaufman further discussed how creativity scholars try to make people care about their areas of study. This begs the question of whether scholars ever explain to their readers, “who cares?” about their topic. Dr. Kaufman noted that, “An awful lot of academia isn't very good at explaining this...Life isn't good at it, either; if you watch late night infomercials, for example—why do you need this product, exactly?”

So with Dr. Marie Forgeard, Dr. Kaufman examined 200 papers to see if their authors explained why creativity is important, and if so, what reasons they gave. As it happened, 71% of the articles offered “little or no discussion explaining

why readers should care about ICI [imagination, creativity, and innovation]. Less than 10% offered any type of substantive or extensive analysis on why creativity is an important variable to study” (Forgeard and Kaufman 2016, p. 255). As Dr. Kaufman aptly noted, we could all be a better at thinking about how we address our readers' understanding of why a topic, subject, or argument is important—of essentially answering for them “why care?”

This lack of articulation by researchers and scholars about the importance of creativity has only contributed to lack of common understandings. As Dr. Kaufman points out, there are a lot of misperceptions about creativity in popular culture and discourse. For instance, there has been extensive discussion of the need to develop and enhance creativity among students, and in graduate schools and business and industry there is constant rhetoric about the desire to recruit and develop more creative workers. Yet this is actually problematic given that many people do not necessarily know what this means:

Most people aren't good at knowing what creativity is—you see that a lot with teachers. They want to nurture it, but most education programs don't have any classes on it. So teachers aren't really sure what it is, or how to improve it, or what would nurture it or what would stifle it. And how could they, if they haven't been taught it? Similarly, in business they want creative workers...but they want a certain type of creative worker. They want expected creativity or creativity that will be a more efficient way of doing something. Or the next great idea – but without any of the costs. But creativity costs money, it costs time, it costs resources—creative people are also more likely to make mistakes. They are more likely to move on from a company. So there are costs of having creative people in the work force. It's easy to say you want creative people.

Dr. Kaufman's perspective does not naysay the importance of creativity, a concept he studies and clearly places value on. But importantly, he does point out that we often do not bring a critical lens to the rhetoric around creativity or articulate a clear vision of what it means and why it matters. He notes that from a research perspective, as much as we already know, there is still much that we do not know about creativity.

There are a wide variety of research agendas involving creativity which could speak to its value. One that Dr. Kaufman has begun to explore lately involves the ways in which people can use their creative pursuits to find meaning in life (Kaufman, J. C. Finding meaning with creativity in the past, present, and future. Perspectives on Psychological Science (unpublish data)). Creativity can help people frame the importance of their life; it allows expression and reflection and may help us to make sense of difficult things. As Dr.

Kaufman explains, the work that scholars have done in this field have contributed to an understanding of the ways in which creativity can help people feel like they are working toward a “symbolic immortality.”

If you do something that's creative in almost any domain, it has a decent chance of outliving you. If you look around your office or your house, you might notice how many things were invented by people who are long dead. How many of your books, or the music you listen to, or the fashions that you wear, are by people who may have been dead for centuries! You may know their name; for instance, everybody knows Mozart and Shakespeare. Or maybe you don't. Few people know who invented air conditioning – that doesn't mean we don't appreciate the person.

This sense of continuity and lasting value imbued by engaging in creative work makes it an inherently valuable part of what it means to be human. Given this, creative expressions, whether big or small, may have invaluable benefits for our health or overall well-being. Creativity can be one of the core ways that humans develop a sense of stability, growth, and continuity, in their lives and beyond. Along these lines, Dr. Kaufman's work has sometimes involved looking at the ways that different types of creativity—even smaller acts of everyday creativity or mini-c insights—matter quite a lot.

Expanding the Maze of Creativity

Dr. Kaufman explains that his definition of creativity, “something both new and task appropriate,” hardly breaks from the field; however the ways he has conceptualized it in his research marks a specific turn. With fellow creativity researcher, Dr. Ron Beghetto, Dr. Kaufman presented the Four C Model of Creativity – expanding the traditional dichotomy of “Big-C” (eminent, genius-level displays of creativity) and little-c (everyday instances of creativity). These two categorizations seemed too simplistic and encompassed too wide a range of creative behaviors and activities, so Kaufman and Beghetto (2009) introduced mini-c and Pro-C as two additional categories. By including mini-c, they were able to capture the personally meaningful creativity inherent in learning. While incredibly important, it is less visible or as obviously creative as little-c. The unique insights that students make while learning allows “mental constructions that have not (yet) been expressed in a tangible way” be considered creative (Kaufman and Beghetto 2009, p. 4). Similarly, professional creativity (Pro-C) gives a name and nuance to the ground between Big-C and little-c; those who are creative experts but have not achieved eminence are still recognized as more than “little-c” creative.

Dr. Kaufman explains the motivation for finding a name and conceptualization for Pro-C lay within the movie *Amadeus*, directed by Miloš Forman. Antonio Salieri, a contemporary of Mozart's, was depicted as a bitter and envious rival, whose creativity was overshadowed by Mozart's clear creative genius. Elaborating, Dr. Kaufman says, “Salieri, as played in that movie, was where Pro-C came from. It was one of my favorite movies as a kid - and it begged the question [if you're considering creative genius], what do you do with Salieri? We know what you do with Mozart. But what about Salieri?”

By offering this more complex model of creativity, Drs. Kaufman and Beghetto suggest that it can become easier to parse which creativity assessment to use. For example, since mini-c creativity is about personally meaningful connections made while learning, assessments should support students in their burgeoning creativity and teachers in understanding how to better nurture those interests. To this end, self-assessments that have students reflect on their creativity are one of the more useful tools (Kaufman and Beghetto 2009), though as Dr. Kaufman reflects on the field, he recognizes measurement remains one of its biggest challenges.

We still don't have the ideal measure. We have a lot of measures and many of them are solid. We have the Consensual Assessment Technique which I like, but it's a pain to do. We have Divergent Thinking, but again, that only gets at part of creativity... These tests all measure a certain aspect. They don't measure everything—but they weren't designed to be the end all be all—they were designed to be part of the puzzle.

That said, Dr. Kaufman also acknowledges that there may be more than just the Four-C's. As he said, “They're not meant to be buckets, they're meant to be this kind of sliding scale, or sliding maze, as the case may be.”

Further complicating this puzzle, Dr. Kaufman takes a domain-specific view, understanding creativity as something that manifests differently across different subjects (e.g. science vs art). The Four-C model offers a developmental framework for how people can be creative in multiple domains. As one moves from domain-general creative attributes (e.g., intelligence, motivation, openness to new experiences) to being more successfully creative in a particular domain, the skills that people need to hone become more specific:

Visual art, written or verbal art, performance, science, business; they tend to involve different skills. Visual-spatial ability is much more important for visual art than for creative writing; being conscientious is much more important for business or science than it is for most arts. It tends to make me a bit more skeptical of anyone that says, “this one thing helps creativity.”

Thinking about creativity as being domain specific also means that individuals can exist at different points along the creativity continuum for disparate domains, allowing for the flexibility to pursue multiple creative pursuits with varying degrees of success. Someone may achieve Pro-C level in one particular area while enjoying little-c or mini-c creativity in others. Dr. Kaufman uses himself as an example to show the importance of recognizing this, explaining, “Honestly, I think I’m only able to [continue creative writing] because I feel successful enough as a creativity researcher that if my plays suck and never gets produced, I’m okay with that. I’d rather they be produced, but I’ve hit the equivalent of Pro-C in one area. I’m fine with being mini-c or little-c in a different area.”

The importance of feeling able to fail is a frequently-repeated refrain in creativity research. Smith and Henriksen (2016) suggest that it is vital to accept failure when teaching students how to think creatively, and argue that failure must not only be indulged, but embraced. Nurturing a growth mindset, playing with mistakes, and embracing ambiguity are several themes that have emerged from work exploring ways to support and nurture creativity (Dweck 2006; Karwowski 2014; Smith and Henriksen 2016). As Dr. Kaufman thinks about how to encourage creativity, he aligns his domain-specific understanding of creativity, which recognizes creativity and knowledge as intertwined, with the importance of supporting exploration and failure.

There’s no such thing as having a five or ten-minute creativity time. It’s much more about weaving it in – allowing some choice in assignments or assignments that are graded as “done” or “not done.” Not many of them, but enough to let a child take a risk.

By thinking about creative practices grounded in the material, students can both show their knowledge and practice their creative skills. Dr. Kaufman recalls:

I remember my favorite assignment in college was in an English class where there were several possible assignments. We had just read *White Noise* by Don DeLillo and one option was a typical compare-contrast essay, but another was “add a page to the book.” If you want to do it well, you’ve got to understand that book! You’ve got to understand the writing style, the content, the characters. So it was no less work; indeed, it was probably more work than I would spend on the other assignment, but it let me be creative while showing knowledge. Creativity is not chaos, it’s not shouting whatever comes to mind.

The inextricable link between domain knowledge and creativity clearly has implications for learning. Learning happens best when ideas and knowledge are contextualized and useful,

with real implications and applications (Lave 2010); and there may be no more motivating, contextual, and real way to learn something than when you engage in the action of creating something new and effective or valuable. In terms of learning and creativity, there are implications for technology as well. As the rapid pace of technological development has accelerated in recent decades, the kinds of tools we have available for developing and accessing knowledge, as well as for engaging in creative acts and creative dissemination have evolved and multiplied.

The Changing Landscape of Creativity and Technology

In reflecting on the role of technology in creativity, Dr. Kaufman identified both key ways technology can contribute to the creative process and the dissemination of creative artifacts in both positive and negative ways, and how he hopes it will continue shaping the future of creativity research.

When thinking about how technology can support the nurturing of creativity, Dr. Kaufman focuses on his experiences as a parent:

I know there are a lot of people who bash video games or YouTube or phones because, “Kids aren’t doing kids are playing or using their imagination.” But I think that’s b.s.—yes, you can spend four hours watching YouTube videos, but you can also spend four hours making one. It’s the same program, the same technology. So much of being a parent is negotiating technology. It’s important that technology is used to create and explore—that it is *used* instead of consumed or passively viewed. To me it’s very much how you approach something, not the device you’re using. Anything can be used for creative purposes and anything can be used for non-creative purposes.

When we consider how technology has impacted the evolution of creativity, Dr. Kaufman presents it holding both promise and concern as a platform for creation and proliferation. He describes how technology has changed the capacity to create and disseminate work out into the world. This has allowed more people to become not just consumers but producers of content or media, and for such producers to potentially share their work without the impediment of “gatekeepers”:

Twenty, thirty years ago, we were in a world of gatekeepers—if you were a musician, that meant you needed to get label executives on your side. You had to win the DJs; otherwise your music would not reach people. If you were a movie maker, you would have to

get the studios interested. If you were a writer, you need a big publisher...It's a different world now. Technology allows us to create music or make movies or do things by using our personal devices in ways that couldn't have been dreamed of—you can make a movie using an iPhone. If you want to record a song, you don't need an orchestra, it's all on the computer. And if you make a short movie, you can upload it to YouTube and spread it on social media. You can record a song, upload it to Spotify, to iTunes, or upload yourself singing to YouTube.

In this series, we have also noted this phenomenon of technology changing how media is created and shared (Henriksen, Hoelting & The Deep-Play Research Group 2016), referring to how this may change the systems model of creativity developed by Csikszentmihalyi (1997). One key aspect of this model focuses on how creative products are disseminated to audience field a field of gatekeepers (e.g. art critics, movie or record producers, etc.). However as new media offers new affordances for creation and communication, as Dr. Kaufman notes, in some instances “the field” of gatekeepers is not as essential—work can be created and shared with the world by individuals. There are clearly implications for how we think about creative production and dissemination. But further, there may be possibilities for the field and future of creativity research, as he notes:

I'm hoping that creativity research can use technology and the internet in the ways that other fields do; such as using more crowd sourcing to get a wide variety of participants, or perhaps using the technology that currently exists to teach AI to score assessments. It will take resources and collaborations between people who might not normally collaborate, but it's possible. I could imagine creativity assessment taking seven leaps ahead and having something where either the computer rates it or people post and rate creative work, and in time it becomes a well-oiled machine. And some research in this area is already starting. That excites me.

Conclusion

This shifting landscape of technology adds complexity and new possibilities to the already intricate space of creativity. As our interview with Dr. Kaufman suggests, the field of creativity research is multi-faceted, contested ground, with plenty yet to discover. Dr. Kaufman emphasized the importance of scholars and researchers doing a better job of communicating what we know about creativity and why it matters—making the case for what creativity is and why it's important to the world at large. Beyond the more instrumental

reasons for supporting creativity in education, he points to the humanistic reasons not always considered in schooling, such as fulfillment, well-being, and a sense of meaning, purpose or continuity in life. But despite all the reasons to pay attention to creativity, it is a challenging construct to enact in schooling without systemic understanding and valuation.

Misunderstandings and misconceptions about creativity in popular discourse have implications and repercussions that filter into education. We have noted how this impacts teachers and students in classrooms—through a lack of knowing what creativity is or how to develop and encourage it—or across business and industry, in which companies and leaders often do not know what they mean or what they are seeking when they claim to need creative people in the workforce. In education, practice is often directed by policy and standards, and as Dr. Kaufman points out:

I think it's hard for anybody making policy because there's so much signal-to-noise out there. There are the creativity researchers who are doing the actual scholarly work. But those are not usually the same people who are writing the popular books or who are consulting or giving talks or who are in contact with policy makers. So a lot of misinformation gets spread, a lot of random stuff—ideas that might not be right or wrong but are irrelevant. And creativity, like almost any scholarly or scientific topic, is complicated. There's no easy answer; there's no, “Oh! Well just do this!” because it's nuanced.

This complicated and nuanced space of creativity needs experts to communicate their findings, theories, research, and perspectives in clear and digestible ways to a broader audience. In some sense, that has been one of the goals of this article series—to feature different experts and explore their views and work in the field. To this date we have featured creativity experts working in neuroscience, design, social justice, education, business, individual and social psychology, among others. Yet we have barely scratched the surface of a diverse, wide ranging, and complex arena. As Dr. Kaufman's perspective suggests, communicating the diversity, complexity and humanistic value in creativity, is perhaps the next big challenge ahead for the future of creativity research.

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