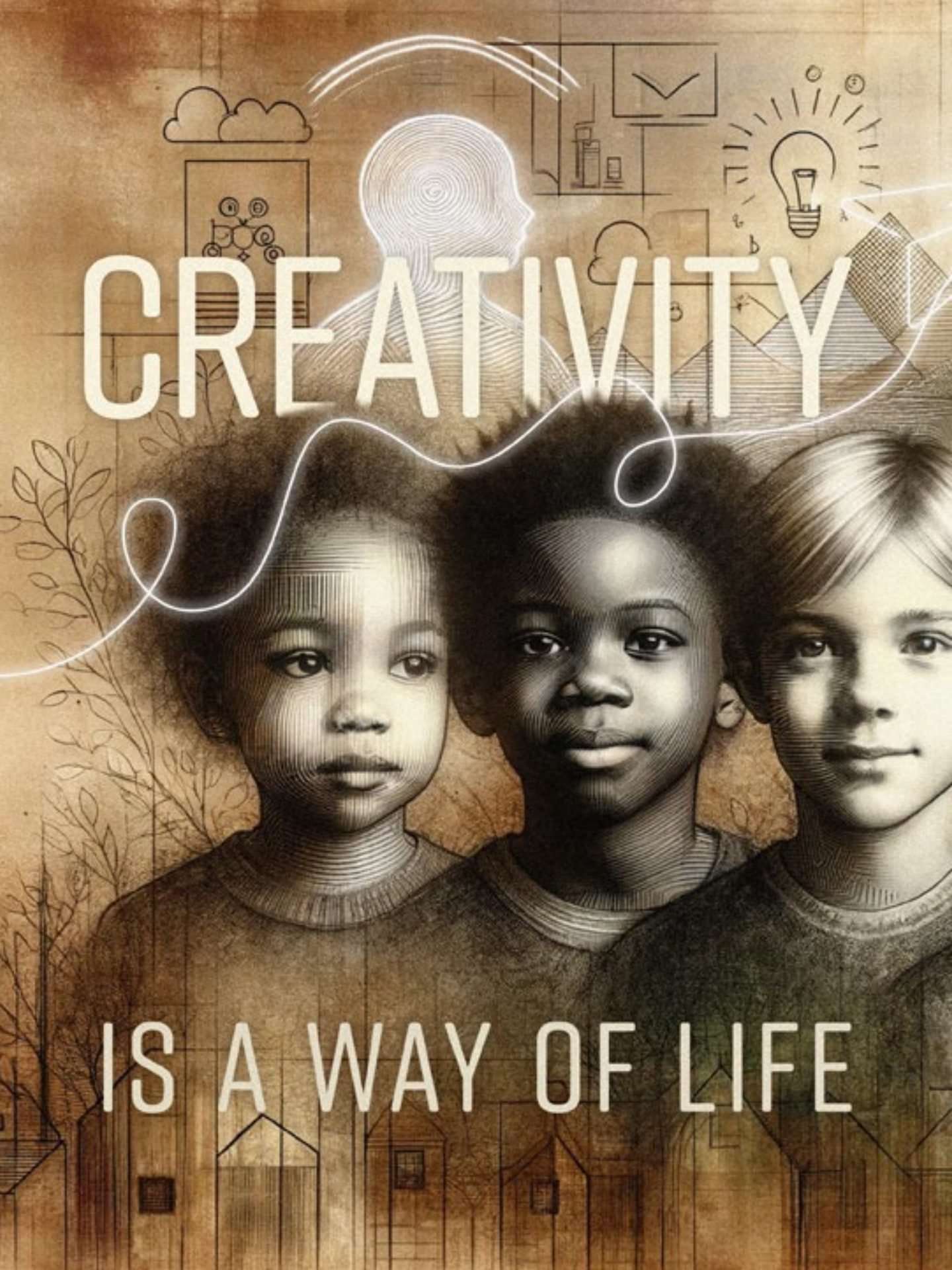
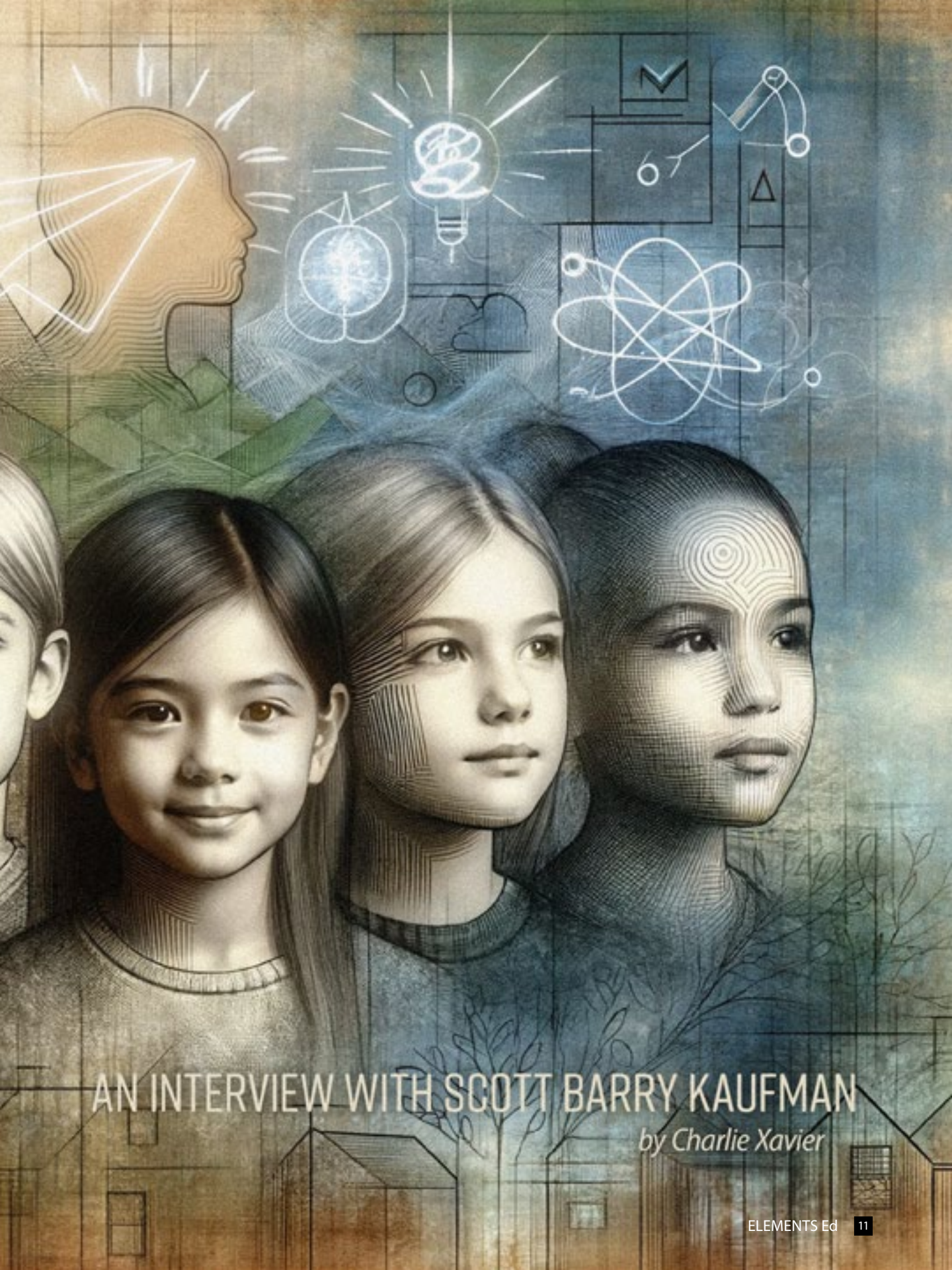

CREATIVITY
IS A WAY OF LIFE



# AN INTERVIEW WITH SCOTT BARRY KAUFMAN

*by Charlie Xavier*

**Scott Barry Kaufman is a cognitive scientist whose areas of research include intelligence, creativity, and the depths of human potential. Kaufman's work focuses on helping all kinds of people live creative, fulfilling, and self-actualized lives. In addition to hosting the popular podcast *The Psychology Podcast*, Kaufman is the author and editor of ten books, including *Ungifted: Intelligence Redefined; The Philosophy of Creativity: New Essays; Wired to Create: Unraveling the Mysteries of the Creative Mind;* and *Transcend: The New Science of Self-Actualization*. He has published articles in *The Atlantic, Scientific American, Psychology Today,* and *Harvard Business Review*. We were fortunate to have the opportunity to talk with Kaufman about his perspective on intelligence and creativity — and on what we can do to make kids smarter.**

This interview was edited for clarity and length.

CX *The question this issue of ElementsEd asks is whether we're up to the task of making kids smarter. We aim to think about what it means to make kids smarter and how we're doing that. What is intelligence? And in what ways are we missing the mark? So my first question for you is: From your perspective, particularly given the neuroscience and research side of your work, are there particular traits or factors that make a person smart? And if so, what are they?*

SBK Well, if you start to define intelligence as anything that you are good at, then it starts to lose its meaning. But if you have too narrow a definition of intelligence, then you really miss out on a lot of intelligent people because you're blind to what it looks like. I tend to take a pretty common-sense approach to defining intelligence. A lot of it has to do with adaptation to your environment, being able to learn, being able to problem-solve, reasoning, being able to learn from your mistakes, and also being curious. I include intellectual motivation and engagement as part of my definition of intelligence. But… I don't think we need to overvalue intelligence. Let's just say intelligence is one characteristic, one thing out of many things. Just like anything in life, everything's an interaction between nature and nurture. I just want to give all kids all the opportunities for intellectual enrichment that we can, without prejudging their ultimate intellectual potential.

CX *I love that answer. I think not being afraid of saying that things are hereditary or genetic is really important in this conversation. What can you say about whether or not these qualities are innate? Can we improve them? What's the relationship there?*

SBK One of Turkheimer's laws of behavioral genetics is that every psychological trait has a heritability coefficient. So partly nature, partly nurture. It's uncontroversial in realms such as introversion/extroversion. Is anyone getting upset when you say introversion/extroversion is influenced to some degree by your genes? Everyone knows there are some people who are curmudgeons. It's not like anyone taught them—they were born out of the gate with this temperament. And likewise, there are some of these kids aged two or three, they're soaking up knowledge like crazy. These gifted kids—they exist. We don't need to make everyone else feel good about themselves by denying that they exist.

But when it comes to how much we can grow and learn and change… I believe in the potential for growth for anyone if they're motivated. And genes influence your motivation for these things, too. Those who soak up knowledge like a sponge are going to be more motivated to keep soaking up knowledge like a sponge. Those who find it extremely difficult to remember anything or learn anything might not be as excited to keep doing that. I worked on this model with Angela Duckworth: high-level achievement is talent times effort. Talent is your rate of learning, rate of development, and effort is time on task, or motivation and engagement on the task. How far you go in life is a function of your rate of development multiplied by time on task and engagement on task. Kobe Bryant was incredibly engaged in basketball because [with] every investment he put into it, he soared. So let's make sure we're also allowing kids to invest in the things that are right for them.

> "…TARGET A LOVE OF LEARNING, THE LOVE OF THE PROCESS OF MASTERY."

CX *So how do we impact those traits? Or, to say that in another way, what are some practical things we can do to make kids smarter?*

SBK I don't know if we can actually make kids smarter. We can inspire them. We can make them fall in love with learning. For a teacher to come and say, "we're gonna make you intelligent"—no, it just doesn't work like that. The number one thing, I think, is to target a love of learning, the love of the process of mastery. Allowing kids to learn that struggle is an essential part of the learning process. We have this attitude these days with kids: the second they're uncomfortable, we placate and coddle them. That's not a way of making them more intelligent.

Even the most intellectually gifted humans in the world are going to face

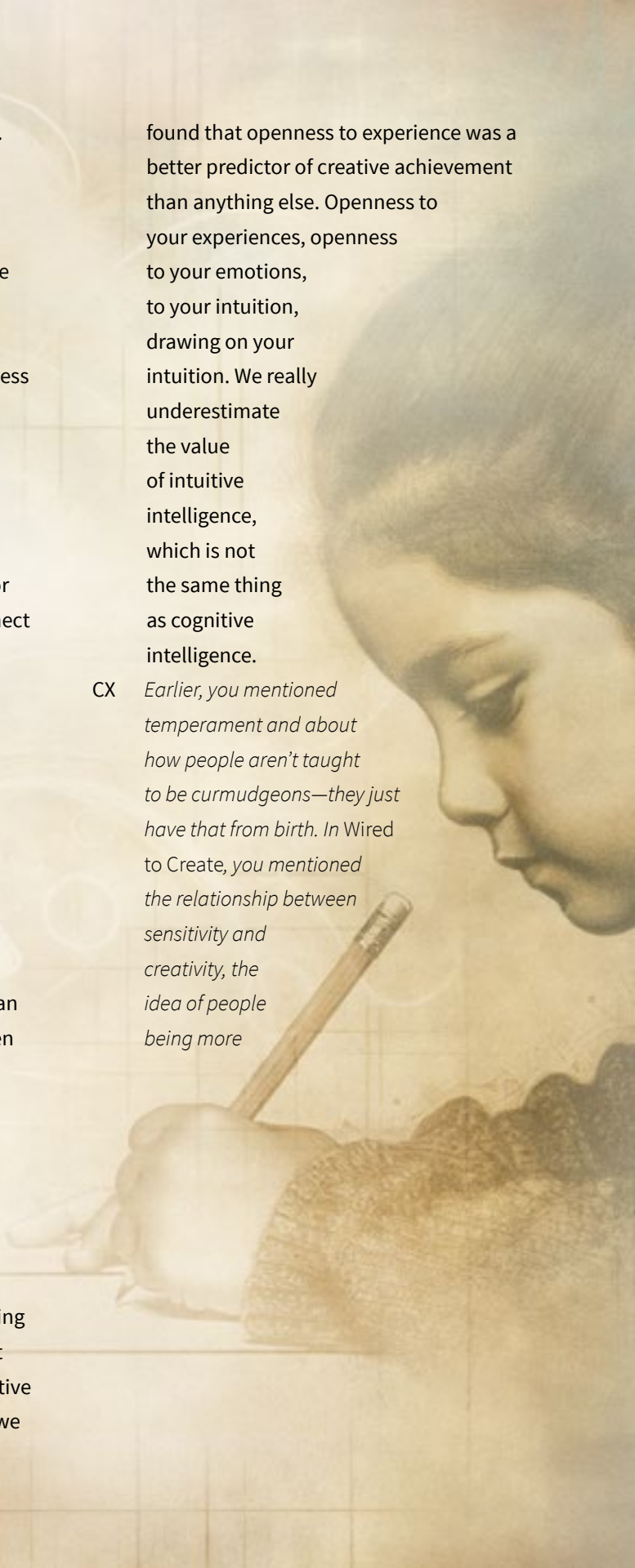
things that are going to challenge them. Einstein struggled with things and had to persevere. So, it really is having them fall in love with the whole process. And, showing the reward that comes from the mastery process—maybe having some project-based reward, where they can demonstrate and have pride in the process they went through. Also, the teacher or the modeler can model enthusiasm. Inspiring mentors are really important; so is showing examples of people throughout history who have changed the world using some of their learning or knowledge. Another way is to help connect the learning material to something that gives them some meaning for what they're doing.

CX *So what about creativity? Is there a relationship between intelligence and creativity?*

SBK That's a very complex question because there are a lot of different forms of creativity. For my dissertation research, I showed that IQ was more relevant to creative achievement in the sciences than the arts. I found zero correlation between IQ and creative achievement in the arts. And that did not just include visual arts, it included things like comedy, creative writing, music, et cetera. And we found that intellectual curiosity out-predicted IQ in the sciences.

So, it's undeniable that abstraction, reasoning, and working memory are going to help you. But intellectual curiosity, at the end of the day, out-predicts for creative achievement. Interestingly, in the arts, we found that openness to experience was a better predictor of creative achievement than anything else. Openness to your experiences, openness to your emotions, to your intuition, drawing on your intuition. We really underestimate the value of intuitive intelligence, which is not the same thing as cognitive intelligence.

CX *Earlier, you mentioned temperament and about how people aren't taught to be curmudgeons—they just have that from birth. In* Wired to Create*, you mentioned the relationship between sensitivity and creativity, the idea of people being more*



*sensitive in an emotional sense, but also more sensitive to details in the world. So, are we all wired to create? Is there a temperament or predisposition to create?*

SBK Well, "yes and"—there's definitely temperament. No offense to accountants, but I've met accountants who literally have no interest in being creative. And you don't want them to be creative with their accounting; they do what they do very well. You don't want pilots to be too creative in the cockpit. But neurodiversity is important. We all can certainly think of creative approaches, no matter what we're doing. Creativity is a way of life. It's a way of being. It's an attitude towards life. I think anyone can approach life in a more creative way to help them be more resilient. Because no matter who we are, including accountants, we all face lots of hardships. And I think creativity can help us all deal with the givens of human existence in our own ways.

> "... ANYONE CAN APPROACH LIFE IN A MORE **CREATIVE WAY** TO HELP THEM BE MORE RESILIENT."

CX *What can we do, if we should, to try and boost creativity? What can we do to encourage that approach to living?*

SBK I think there's a lot we can do to activate people's creative juices and their motivation. I'm a big fan of project-based learning, a big fan of inspiring people. I think inspiration is an undervalued route to creativity. What we want is not forced grit; we want organic grit. Organic grit comes when you're motivated and you are enjoying engaging in a project. Sometimes it can be as simple as prompts in the classroom that are open-ended as opposed to closed-ended. We can stimulate divergent thinking in the classroom by simply opening up reflection questions that don't have single correct answers. For example: "What are some ways that history could have gone wrong? Or could have gone right?" or "How could we have prevented slavery?" Could you imagine if you're a history teacher, and all of a sudden you get a lively discussion among the students trying to figure it out?…. But let's keep going: "What are some of the systems and structures that were in place at the time?" or "If we could go in a time machine, what systems could we have changed?"

I love generating creative questions for students. And any teacher can do that and it's so much fun. And you're basically prompting students to think creatively and in a way that inspires them to want to make the world a better place, to think about what they could do to create systems that make the world a better place, and how they can contribute. These questions do multiple things: they connect the self to the material, they stimulate divergent thinking, and they show that you appreciate students' creativity, not just the ability to be evaluated for the single correct answer.

CX *What do we know about the role of intelligence and creativity in building a good life?*

SBK There are so many different levels on which to answer that question. So many different levels are correlated with your ability to deal with everyday life. There are a lot of everyday complexities of being an adult that require intelligence—I hate to say it, but it really does. Also having impulse control, self-regulation, and being able to plan for your future. I'm writing a book right now and I'm resisting every temptation in the world coming my way. It's not easy—it's hard! It requires an effort of your intelligence to do such a thing. So, different levels of analysis from dealing with life, problem-solving within your own domain of work, and learning new information. Creativity is absolutely essential for the future. The way I look at it, intelligence is your ability to apprehend what is; imagination is your ability to apprehend what could be; and creativity requires both intelligence and imagination.

CX *So, how do you think we can help kids build a flourishing life?*

SBK That requires going way beyond intelligence and creativity. I teach a course called "The Science of Living Well," and I just have one lecture on intelligence and creativity. But the whole rest of the course [covers] so much of what there is to be human. How can you find your calling, your purpose? How can you cultivate more positive emotions and have resiliency in the face of distraction, in the face of adversity? How can you live with your uncomfortable emotions and regulate them? What it means to live a happy, meaningful life is a different question from the question of how to be more intelligent. It's a much broader question. How do you be true to yourself, live your own lifestyle, and own it?

CX *In this issue, we wanted to go beyond a conversation about intelligence, to try to broaden the definition and add other dimensions. With the concept of flourishing life, you talk about concepts such as awareness, compassion, social action, and responsibilities that come with being connected to a larger group of people. How do these concepts factor in your idea of a flourishing life and how can we make kids smarter in these aspects?*

SBK We underestimate the extent to which our prefrontal cortex evolved due to social pressures in our ancestry. That's probably why we evolved the function of intelligence in the first place—to be able to keep track of our social world. There were drastic consequences for not remembering someone's name in the savannah.

Nowadays, we have the remnants of this, we feel social shame for things we shouldn't. We developed intelligence due to social cognition in a lot of ways because we're such a social species. I think it's

a shame that so many of these IQ tests are so divorced from any social realm or any context. Because we're such a social species, such social animals, I think that intelligence plays a role in being able to apply our reasoning skills, understand the emotions of others, understand our own emotions, and our being able to discern the right thing to say from the wrong thing—being able to have a real open awareness of what is going to lead to your growth, what is not going to lead to your growth, and how to contribute to what sort of calling or skill set is most uniquely suited to you. That will most uniquely create a synergy between you and the world, as Abraham Maslow put it, where what's automatically good for you is good for the world.

CX *In some cultures—for example, in Zimbabwe—it's considered unintelligent if you don't ask for help. In the West, all of our intelligence tests are independent. If you ask for help, you're cheating. So I love the idea of the interplay there and the kind of limitations that we have put on intelligence in that way.*

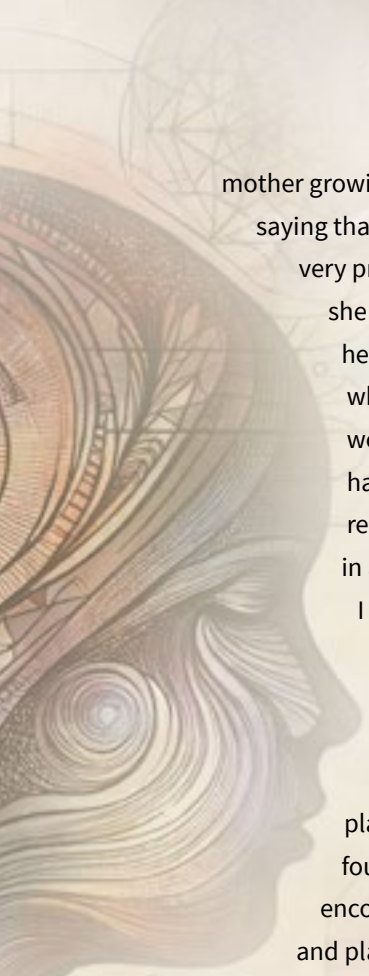
*As we push past intelligence as the gold standard and incorporate all of these different things into what smartness is, what role do you see schools playing in building this flourishing life, this smart life for our children? Or, to put it differently: how might we change schools and what structures could we put in place to support that development?*

SBK I think changing the culture of the school from a model of strict evaluation to a model of inspiration. We need a huge shift from trying to obsessively capture someone's potential at a moment in time to unlocking their potential over a dynamic process. That's why I redefined intelligence.

My theory of self-actualizing intelligence is the dynamic interplay of engagement and ability in the pursuit of personal goals. When schools are our primary focus, it's more important to focus on self-actualizing intelligence than IQ-intelligence because it'll cast a much wider net. With self-actualizing intelligence, you recognize that every single person in that school has their own unique, sacred journey that they are on of their self-actualizing intelligence. And if you can get their unique intellectual skill set to interact with their abilities in the pursuit of a tangible personal goal, then—if you're lucky—some of these kids will catch fire in their lives with who they want to become.

CX *You hinted at this, but what about parents? Are there any general nuggets you can give about how we help parents to help their children develop this flourishing life?*

SBK There's all this research on what optimal parenting requires. It's usually a balance between authoritarianism and freedom…. There's a healthy balance between the two. Creating really strict, firm, basic values in the household is very important, but also giving kids the freedom to explore and the freedom to grow. I had an overprotective



mother growing up. I always feel guilty saying that even as an adult. She was very protective. That was the way she knew to love; I'm not faulting her. But it created a dynamic where I was very scared of the world for a while and didn't have the skills to function. I remember the first time I was in an elevator as an adult alone. I had a panic attack because I didn't know how to function in the elevator. So, I think it's really important to give kids the freedom to play and to roam. With a safe foundation, of course, but encouraging: "Get out, get out and play. You don't need us all the time!"

CX *Artificial intelligence has rocked education in many ways. What role do you think AI might play in making kids smarter, more creative, or even happier in their lives?*

SBK I think that there's great potential for AI to help with self-paced learning, allowing students, without such pressure, to meet the standard rate of learning as everyone else, with really good adaptive approaches to learning, with really good feedback. Automatic feedback saves a lot of teacher headaches, and students can get some additional support at home, fostering greater connections between parents and students throughout the day, and allowing students to do more projects and create portfolios that carry them around throughout the years.

The sky's the limit in terms of what AI can do — we're only limited by the human imagination. Of course, there are also potential challenges. There are always pitfalls that come with a mechanical approach to something that strips the humanity and real heart of an intimate connection. The teacher providing a human touch is essential for the learning process and I think always will be. Ed

**Scott Barry Kaufman** is a cognitive scientist and humanistic psychologist who uses his research to help all kinds of people live a creative, fulfilling, and self-actualized life. He is one of the top 20 most cited scientists studying intelligence, and in 2015, he was named one of 50 groundbreaking scientists who are changing the way we see the world by *Business Insider*. He is the founder of the Center for Human Potential and the founder of Self-Actualization Coaching.

**Charlie Xavier**, an educational neuroscientist and psychologist, has 14+ years of experience as a researcher, teacher, and advocates for neurodiverse student populations. He is the author of the award-winning children's book *Neurofables: Interactive Stories That Build Better Brains: Inclusion*, which leverages the compelling power of story and children's natural neuroplasticity to address and overcome deeply ingrained, prejudicial thinking habits.