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Confessions of a ‘Cyber-Optimist’

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Neuroscientist David Eagleman answers a question about people’s obsession with their smartphones, saying that he believes today’s instant access to the world’s knowledge may actually enhance human learning. On stage with Stanford’s Tina Seelig, Eagleman describes how all the information we now have at our fingertips creates a more enriched context for curiosity within the brain.

Transcript

as to why we are so glued to our screens? - Yeah, I mean the reason you're so glued to your screen is because everything you care about is there. I mean, you have a few friends around you and you've got thousands of friends right here. And you've got the entirety of humankind's knowledge in a rectangle in your pocket, so that's pretty cool. I'll tell you my opinion on this, which, actually I'll tell you two things on this. One is that it's proven very hard to do good experiments on what the meaning of this is, whether it's bad for us or good for us. And the reason is, it's almost impossible to find a good control group. So, in other words, if you, how old are you? - I'm 19. - You're 19. So if you look for 19-year-olds who didn't grow up digital like you did, you can't really find them unless they're Amish or they're terribly impoverished or something. And those aren't good control groups to you. And you can't compare you to the previous generation 'cause there are a hundred other differences there, just in terms of nutrition and pollution, there's a million other differences.

So the thing is, what everyone's trying to answer is, what does it mean for a 19-year-old to grow up digital? How does that change the brain? But it's not an easy question to answer. If you ask my opinion on it, I'm actually a real cyber optimist about this. I think that your generation's going to be smarter than my generation because of the following reason, which is that to make changes in the brain you need the right cocktail of neurotransmitters to be present for things to actually stick, for neuroplasticity to happen. That cocktail of neurotransmitters, that correlates with engagement, with curiosity. And this is something that even the ancient Greeks had noticed, they outlined seven different levels of learning and the highest level of learning is when you care about something, you're curious about something. So, when you want to know something, you look on the computer right away, you get the information in the context of your curiosity. In contrast, when we were in school, we got a lot of just-in-case information. You know, "Just in case you ever need to know "these ten dates in Mongolian history, here you go." But you're getting a lot of just-in-time information. And that makes a big difference. From the point of view of neuroplasticity, it makes a big difference in terms of being able to remember and recall things as you need them.

And what I think it means is that if you had somebody visualizing the entirety of the world's knowledge, what people growing up now can do is enter from whatever angle they care about, whatever resonates with them. Whether that's baseball or dancing or art, whatever the thing is, you can enter and we all know what it's like to get lost on some Wikipedia thread and you end up, you start over here and you end up on something you have no idea what the relationship is, how you got there, but the point is you're surfing through the world's knowledge that way and I think it's really terrific.