## Is "Screen Time" Dangerous for Children?

Written by Alison Gopnik.

I was in the garden with Augie, my four-year-old grandson, watching the bees in the lavender. "Bees make honey," I said, transmitting the wisdom of the ages in good grandmotherly fashion. After a pause, Augie replied, "How do they make the honey?" There is nothing like a child's question for exposing the limits of a grandmother's wisdom.

"Actually, Augie, I don't know," I said.

"But, Grandmom, you have your phone," he said. For Augie, a smartphone is as natural and unremarkable as the bees and the lavender, and holding one is almost synonymous with knowing.

I Googled "How do bees make honey?" There were dozens of videos explaining it. As we stood in the garden, shielding the screen against the sunlight, Augie and I learned that worker bees secrete an enzyme called invertase, which converts nectar into dextrose, then flap their wings to thicken the nectar into honey.

"It's kind of hard to see the bees," I said, squinting at the screen.

"Why don't we watch it on the big computer?" Augie said.

For the next hour, we sat inside, bee-surfing. Someone in Sweden had posted a speeded-up video of bees building a hive, months of construction compressed into two minutes. There was a whole subgenre of beekeeper selfie videos. Best of all was a BBC documentary about the "waggle dance," the remarkable communication system that allows bees to give one another directions to the places where they've found nectar.

My own childhood was dominated by a powerful device that used an optical interface to transport the user to an alternate reality. I spent most of my waking hours in its grip, oblivious of the world around me. The device was, of course, the book. Over time, reading hijacked my brain, as large areas once dedicated to processing the "real" world adapted to processing the printed word. As far as I can tell, this early immersion didn't hamper my development, but it did leave me with some illusions—my idea of romantic love surely came from novels.

English children's books, in particular, are full of tantalizing food descriptions. At some point in my childhood, I must have read about a honeycomb tea. Augie, enchanted, agreed to accompany me to the grocery store. We returned with a jar of honeycomb, only to find that it was an inedible, waxy mess.

Many parents worry that "screen time" will impair children's development, but recent research suggests that most of the common fears about children and screens are unfounded. (There is one exception: looking at screens that emit blue light before bed really does disrupt sleep, in people of all ages.) The American Academy of Pediatrics used to recommend strict restrictions on screen exposure. Last year, the organization examined the relevant science more thoroughly, and, as a result, changed its recommendations. The new guidelines emphasize that what matters is content and context, what children watch and with whom. Each child, after all, will have some hundred thousand hours of conscious experience before turning sixteen. Those hours can be like the marvelous ones that Augie and I spent together bee-watching, or they can be violent or mindless—and that's true whether those hours are occupied by apps or TV or books or just by talking.

New tools have always led to panicky speculation. Socrates thought that reading and writing would have disastrous effects on memory; the novel, the telegraph, the telephone, and the television were all declared to be the End of Civilization as We Know It, particularly in the hands of the young. Part of the reason may be that adult brains require a lot of focus and effort to learn something new, while children's brains are designed to master new environments spontaneously. Innovative technologies always seem distracting and disturbing to the adults attempting to master them, and transparent and obvious—not really technology at all—to those, like Augie, who encounter them as children.

Like the bees, we live by the reports of others. Unlike the bees, we can invent new worlds, constructing them out of sonic vibrations, ink, or pixels. Sometimes those worlds deceive and confuse; at other times, they tell us something revelatory. When Augie's father got home, Augie rushed to meet him, his words tumbling out in excitement. "Daddy, Daddy, look," he said, reaching for the phone. "Do you know how bees make honey? I'll show you. . . ."

Originally published at NewYorker.com.