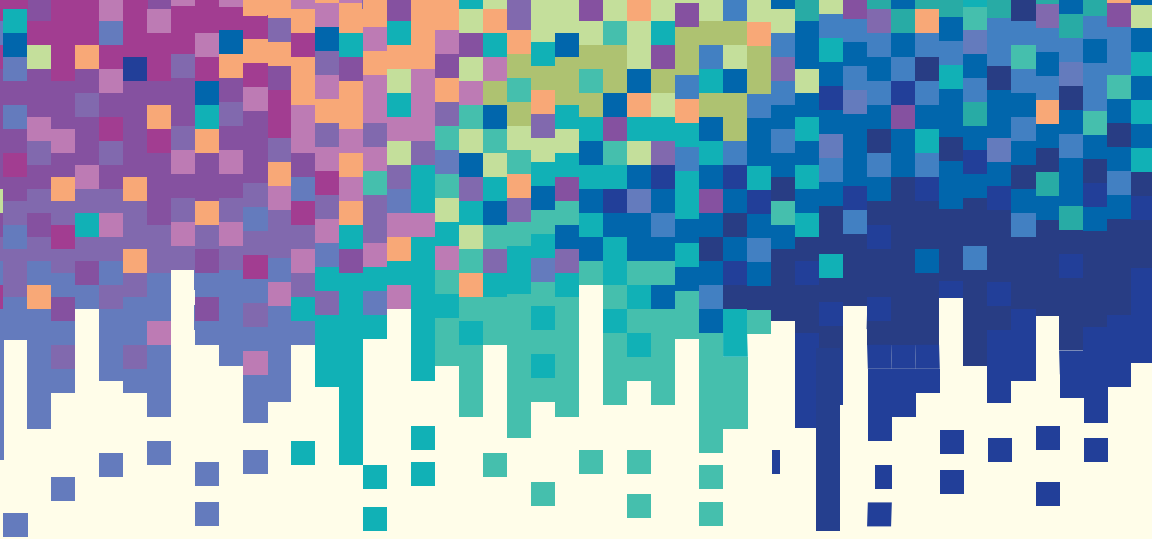




It's Their WORLD...

Teens, Screens,
and the Science of
Adolescence

■ ■ ■ Erin Walsh ■■■

It's Their World

"It's Their World is a thoughtful, thorough, and above all actionable resource for any parent striving to understand what research says about teens and tech. Erin Walsh is deeply dedicated to helping parents support their kids. She is a steady, reassuring guide through the big issues of adolescence in a digital world. Parents who want to choose connection over conflict will find pages and pages of ideas to try today."—**Dr. Emily Weinstein**, researcher and co-founder, Center for Digital Thriving at the Harvard Graduate School of Education; and coauthor of *Behind Their Screens: What Teens Are Facing (And Adults Are Missing)*. For over a decade, her work has focused on understanding teens' experiences with new technologies and creating resources to help adults meet the moment.

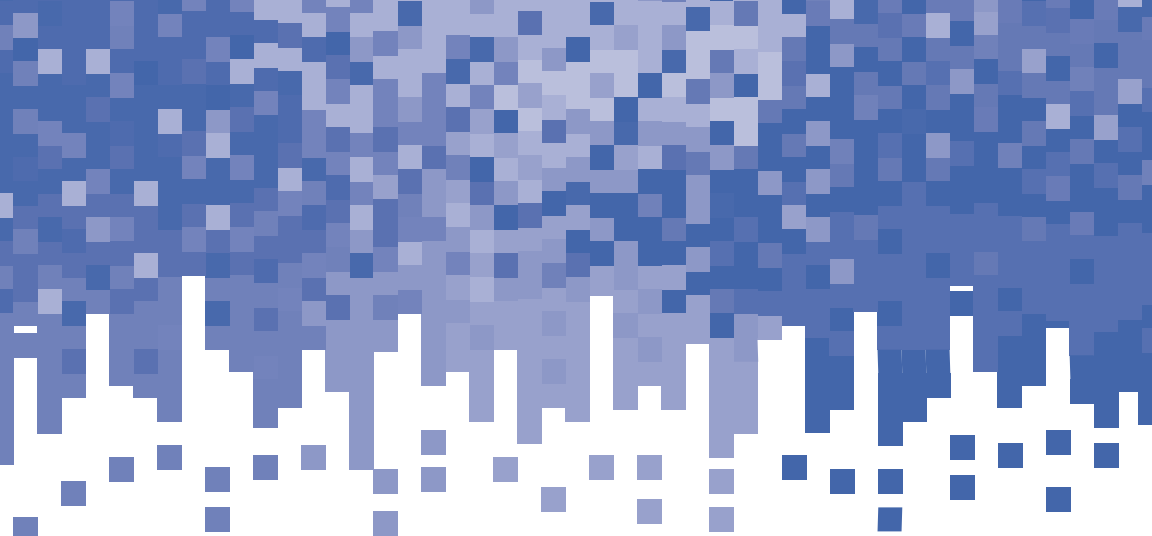
"Erin Walsh joyfully explains the science behind how social technologies impact children and families, intermixing accessible expert perspectives with down-to-earth guidance, thought exercises, and activities to try with your own kids. Throughout the book, Walsh is keenly aware that a one-size-fits-all and purely protectionist approach is not always the most helpful. A true highlight in this work is how much youth voice and storytelling are honored and embraced—a key ingredient in unlocking the puzzle of parenting an adolescent in the ever-present digital developmental discovery hub."—**Linda Charmaraman, Ph.D.**, senior research scientist at the Wellesley Centers for Women, founder and director of the Youth, Media & Wellbeing Research Lab at Wellesley College, co-author of the 2023/2024 American Psychological Association's health advisory on social media use in adolescence

"In *It's Their World*, Erin Walsh offers an empathetic, research-based exploration of adolescence in our tech-saturated era. Combining the latest science with practical wisdom, this book is an invaluable resource for parents who want to help their teens navigate the complexities of a technology-mediated life. Walsh reframes technology from a source of alarm to a powerful opportunity for growth—when guided by understanding and connection."—**Katie Davis**, author of *Technology's Child: Digital Media's Role in the Ages and Stages of Growing Up*, professor of digital youth and co-founder and co-director of the Digital Youth Lab, University of Washington

“Amazing! This is an essential guide for every parent navigating the minefield of today’s digital world—practical, insightful, and packed with really concrete strategies and language to help you tackle it alongside your kids. It also illuminates how young people’s developing brains shape their choices, offering wonderful insight to create a smoother path to healthy screen habits for both parent and child.”—**Danielle Feinberg**, visual effects supervisor at Pixar Animation Studios, including for Disney and Pixar’s *Turning Red*; advocate for girls in STEM; artist; and mom of twins

“The title of this wonderful new book exploring the vast, complex world of media (specifically social media) in the lives of teens—*It’s Their World*—says it all. Teens and those of us who care deeply about their well-being will come to understand the influence of media through a developmental lens. Erin Walsh combines compelling scientific knowledge, her own wisdom and experience as a parent, and her years of work in the field of media advocacy and education to offer us this scholarly yet easy-to-read book. I appreciate the positive tone (teens aren’t always easy!), the incorporation of the words of teens themselves, and especially the insightful interweaving of science and common sense. Erin Walsh’s winning approach to guiding teens (and adults) to use and enjoy media wisely and intentionally will serve us well.”—**Dr. Marjorie Hogan, MD, FAAP**, and former member of the American Academy of Pediatrics Council on Communications and Media

“*It’s Their World* is a gift to parents and teachers, simultaneously an optimistic confidence-builder for the adults in the lives of adolescents and a constant reminder that it *is* their world. This is an evidence-based guide to being present for teens (and for soon-to-be teens) rather than restricting them so they always have us as a lighthouse, encouraging their curiosity and imagination as they build the world they want to live in.”—**Michael Rich, MD, MPH**, author of *The Mediatrician’s Guide: A Joyful Approach to Raising Healthy, Smart, Kind Kids in a Screen-Saturated World*, director of Digital Wellness Lab and Clinic for Interactive Media and Internet Disorders, Boston Children’s Hospital, associate professor of pediatrics, Harvard Medical School, and associate professor of social and behavioral health, Harvard T. H. Chan School of Public Health



It's Their WORLD

**Teens, Screens,
and the Science of
Adolescence**

Erin Walsh

free spirit
PUBLISHING®



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For Katie, Miles, and Emmett.

The world is changing quickly, and so are we.

I am grateful we get to figure it out together.

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“You mean we can just leave?” I joked with the nurse as we prepared to check out from the hospital. Despite being in the ninety-ninth percentile for length, our newborn baby looked small and exceedingly vulnerable. I felt the same way. The humming machines and bright lights in the labor and delivery area that had been annoying just hours before now felt oddly soothing. I resisted the urge to invite the entire team of nurses and midwives to come home with us. “At least people here know what they are doing,” I thought.

“You have everything you need,” our nurse assured us. “Remember, you are a team,” she said, gesturing toward the baby, who also appeared at ease. I was grateful for her vote of confidence. “I like that idea,” I said to my wife. “We are a team.”

Several hours later, I was feeling less confident in our team dynamics. Our first night at home felt chaotic and overwhelming. My search history between 1:00 and 4:00 a.m. illustrated my apprehension. I Googled, “Is it normal for a newborn to not pee for hours?” Hours later, after a diaper change, I typed, “Is it okay to get infant pee in your mouth?” Shockingly, the internet did not provide the reassurance I craved. When the sun rose, I was so grateful for my newborn’s grasp reflex. I benefited enormously from holding my baby’s hand.

Welcoming a child was a life-changing experience for us, as it is for all parents. At first, it felt like there were a thousand ways we could get things wrong. In the months that followed, we relaxed and learned to adapt to the reality that change is constant in parenthood. Extraordinary stress can shift quickly to extraordinary love—and back and forth and back again. You probably hear a lot about the rewards of parenting. But the strain is important to acknowledge too. According to Dr. Lisa Damour, one of the cardinal rules of psychology is that change equals stress. She explains, “The more change a life event requires, the more taxing it will be.”¹ Raising children is a life event that requires a *lot* of change.

For years, it was hard to imagine ever encountering another transformation as seismic as becoming a parent was. Then adolescence happened, and the

earth shifted under our feet again. Suddenly there were changing bodies, feelings, and friends. Technology accelerated the tremors and exposed new fault lines. My children are no longer babies. They are both still in the ninety-ninth percentile for height, and they no longer look small and vulnerable. My older kid is now taller than me. Together with their friends, my kids tap, play, scroll, text, consume, and create. One day my middle schooler sent me a link to a hilarious video followed by “Love you. Be home later.” Compared to the hands-on, sleep-deprived days of early childhood, at moments like this, I think, “We have arrived!” Other times, emotional storms rip through the house, leaving all of us shaken. Our late-night Google searches reveal a new level of vulnerability. Like many parents of adolescents, sometimes I worry about my team, and I wonder, “What do we do when our kids no longer want to hold our hands?” I have spent my career studying screens and adolescent development. I am convinced that understanding adolescence can make the parenting journey a bit easier. Yet, even equipped with this knowledge, I find that the real-life moments of parenting teenagers can still be bewildering. The perennial gap between theory and practice is a reminder that parenting is as much an art as a science.

My Expertise—and Yours

I wear multiple hats when I write and speak about teens and screens. These intersecting identities shape my story in important ways.

I am a writer and a translator. My professional work is to dig into the research and comb through the data on adolescent development and digital media use. I am not a clinician or primary researcher. Instead, I bring more than two decades of experience translating the latest science into easy-to-understand language for parents, educators, and young people.

I got into this field when my dad started one of the first nonprofits in the country dedicated to studying media’s impact on child health and development. Starting when I was young, my dad asked me to think about the power of screens in my own life. These conversations planted seeds that later took root in my professional life. After we navigated my adolescence together, my dad and I figured we’d gotten through the hardest part and would make a good professional team. Now, we write and work together.

I am also a speaker and facilitator. I have had the opportunity to meet people across the country, from big urban centers to small rural communities. I have listened to their experiences, hopes, fears, and worries. The stories in this book reflect my best recollection of these interactions, though I have changed many of the names and identifying characteristics to protect privacy. Through these conversations, I have learned more about the complexity of the role that digital technologies play in human lives than through any other source.

Perhaps most importantly, I am a parent. As I write this book, one child is quickly approaching adolescence, and one is already in it. With their permission, they show up here and there in the upcoming pages. This isn't a family memoir, though. I started with recollections of my first days of parenthood because I want to ground this research-packed book in the intense vulnerability, exhaustion, joy, humor, and agony of parenthood. I hope this book supports you in this space.

The first major professional talk I delivered happened by accident. My dad was scheduled to give a keynote address in a northern Minnesota community to a large audience of early childhood professionals. When he spiked a fever the day before the talk, it was clear that he was not going to make it onto that stage. He called the host organization to apologize and outline their options: they could cancel, reschedule, or hire his twenty-four-year-old daughter instead. To my excitement and dread, they opted for the backup Walsh.

The keynote topic was the impact of screen time on young children. To say I was nervous is an understatement. I had been hired to speak in communities before, but a major conference keynote was an entirely different matter. I armored up with a power suit and spent the entire night in a hotel poring over my dad's slide deck. I kicked off the morning by acknowledging the elephant in the room: "I know you are probably disappointed because I am not the Walsh you were expecting. But the good news is that I have some of his genes and, even better, I have his slides. So let's get going." Everyone laughed. I relaxed, and the talk went just fine. But looking back, it was clear that I wanted to be perceived as an expert who was competent to take the stage. To rise to the occasion, I crammed as much data, research, and "how-to-do-this-right" into my talk as I could.

Since then, I have delivered many keynote addresses to even larger audiences. I have also learned a lot about the kind of expertise that's needed to figure out

how to live, teach, and parent well in a world dominated by screens. I am still passionate about the role of data, research, and evidence. At its best, research reflects lived experiences, helps people better understand problems and possibilities, and points to practical strategies. I have seen firsthand that understanding what is going on *inside* kids can help parents show up for them better. That's a big reason why I wrote this book.

Now that I am a parent, however, I am always a bit uncomfortable when I am introduced on a big stage as a “parenting expert.” I am profoundly aware that parenting is a vocation in which no one can claim to be a universal expert. The science is clear on this point: There is no single recipe for raising thriving kids. Technology is constantly changing. Kids are too. All of us parents are trying to do our best for our children. Each parent is both expert and novice in every moment. We are expert in that we know our kids, cultures, and contexts. We see our kid's strengths, skills, and vulnerabilities. We are novices in that change is constant, and we are wonderfully and maddeningly human.

A NOTE ON TERMINOLOGY

The term *adolescence* is often misunderstood. Many associate it only with the teenage years. In reality, it spans a broader age range. From a neurological perspective, adolescence extends from age ten to twenty-five.² This may provide some measure of comfort to those of you who feel like signs of adolescence are emerging earlier than you prepared for. If you are parenting a young adult, it's a reminder that your kids are still growing and developing in significant ways.

Throughout this book, I use the terms *adolescents*, *teens*, *kids*, and *children* somewhat interchangeably when speaking generally. However, when discussing specific developmental stages, I'll use more precise language. For example, I will use the term *early adolescence* to describe the late elementary and middle school years, spanning roughly from ages ten to thirteen. I will use the term *older adolescence* to refer to the high school years and beyond.

I use the word *parent* throughout this book to mean any adult who is bringing up and caring for teens. A strong network of rooted relationships helps teens thrive. This includes primary caregivers of all kinds. And because I'm a parent, I will also use the inclusive *we* at times in the text. This risks creating some confusion—who exactly am I referring to?—but I choose to use *we*, *us*, and *ours* occasionally to communicate something important: I am not writing this book from some removed place of enlightenment. We are all in this together.

■ There Are Many Ways to Get It Right

“I missed your workshop last night!” a parent remarked as we both walked our kids into school. It was an oddly warm winter day in Minnesota. In place of the sharp cold that tends to bring brilliant sunshine, the air felt gray and heavy.

“Listen,” I responded. “Winter is long, life is busy, and it’s a gray week. It’s a miracle we can get out the door at all some days.” We both laughed.

“I really needed it, though,” the parent responded. “I just feel like there are a million ways to get this wrong right now! It’s exhausting.”

“What do you mean?” I asked.

“My kid just got a phone, and I feel like it unleashes a million new things. There are so many overwhelming headlines, so many parental controls to try to figure out, apps that I don’t know the names of, and a lot of advice I want to give my kid that she doesn’t seem at all interested in. Things are changing so quickly. I just can’t keep up,” she replied.

“I hear you,” I replied. “It’s a wild time to be a parent and a wild time to grow up.”

We both quieted, dissatisfied with this underwhelming summary.

Then I shared some reassurance: “I have to say, though, I am comforted by the research. It reminds me that we know a lot about what teens need from us—even as technology keeps changing. It also reminds me that there are so many ways to get it right.”

I often repeat this to myself when I’m feeling overwhelmed. The dizzying pace of technological change makes it easy to throw up my hands, convinced that I can’t possibly keep up. As I write this book, artificial intelligence (AI) is upending the world. By the time you read these pages, there will be new apps, new technologies, new opportunities, and new risks. Things change in a blink. This is what it means to be alive during the digital revolution.

It’s my job to stay on top of these changes and to understand the way they shape the dynamics of adolescence. But this book is not organized by tech innovations or digital risks, and here’s why: Chasing ominous headlines, the latest AI innovations, or trending topics *out of context* can contribute to the feeling of we-will-never-keep-up-and-we-are-never-enough. It does little to ease the stress and strain that inevitably come with changing technology and changing

children. Instead, this book is organized around the core developmental tasks of adolescence. Each part invites you to consider how your kid is exploring an important developmental question, and the chapters in each part describe how teens try to answer these questions:

1. “What am I capable of?”
2. “Who am I?”
3. “Where do I belong?”
4. “How can I contribute?”

Young people are exploring these questions both offline and online—with time spent online ever increasing. The average thirteen- to eighteen-year-old in this country uses entertainment screen media for eight and a half hours a day.³ For today’s teenagers, the digital world *is* their world. It is no doubt different from the one you grew up in. This is the nature of raising teens; each generation navigates new risks and opportunities. But one thing remains the same: As young people’s worlds expand during adolescence, they benefit tremendously from the curiosity and support of caring adults.

I hope this book shifts the conversation away from the framing question “Is technology good or bad for teens?” The research indicates that for any individual young person, the evidence-based answer is unsatisfying: “It depends.” A more nuanced set of questions is needed. This book invites you to ask, “How can I support healthy development across online and offline contexts?” This question in turn inspires other questions, such as “When does technology help kids build a sense of belonging?” and “What supports and boundaries do kids need as they explore their identities?” Individual answers to these questions differ. The answers are shaped by a kid’s specific strengths and vulnerabilities, by their digital activities, and by culture and context.

Many parents I talk to feel trapped in a cycle of conflict over technology, caught between constant worry and endless power struggles. The biggest casualty in these cycles is often the very thing that young people need most in a digitally connected world: a collaborative relationship with you. Asking a more nuanced set of questions isn’t just interesting. It can change your perspective, your parenting strategies, and your connection with your kid.

You are reading this book because you care about your teenager. You want to do more than just protect them from harm. You want to prepare them to live a whole, connected, and meaningful life. As you will learn in the pages ahead, the adolescent years are a time of profound growth and opportunity to shape these kinds of positive futures. They can also be a baffling, overwhelming, and sometimes scary part of the parenting journey. Knowledge of what's going on *inside* your kids as they grow up—online and offline—can bring real comfort and reassurance when you need it most. It also equips you with strategies to navigate this critical period and offers supports grounded in what your teen needs to thrive.

This book tackles important and challenging topics such as sexting, cyberbullying, and online pornography. It explores parental monitoring, boundaries, and youth mental health. It approaches these topics *in the context* of adolescent development, so I recommend reading it from front to back if possible. Reading a full book from cover to cover is a big lift, but a worthwhile one, because understanding your kid's big changes and how they fit together may help you see them and the long arc of their development more clearly.

That said, I know that parenting challenges often feel specific and urgent. In those moments, certainly page ahead to sections or topics that feel particularly relevant. Then, when you have a little more bandwidth, I invite you to return to the text in its entirety.

Sprinkled throughout the book, you will find special features called Inside Insights. These scenarios are meant to spark curiosity and model how developmental insights can help parents slow down, build empathy for challenging behaviors, and respond in ways that are more likely to meet adolescents' needs instead of escalate conflict.

You'll also find tools for reflection and action throughout this book. These features are called Reflect and In Action. The prompts in these sections are designed to help you situate the research within your own lived experience, family system, and goals. Some will feel relevant and useful immediately. Others, not so much.

A NOTE ON SCREEN TIME RESEARCH

In this book, I draw on research that spans a range of disciplines, including clinical and developmental psychology, pediatrics, communications, neuroscience, youth studies, family social science, and media studies.⁴ This collection of evidence tells us a lot about young people's digital activities and the impacts of those activities. There are, of course, limitations to the current research. Here are a few such limitations:

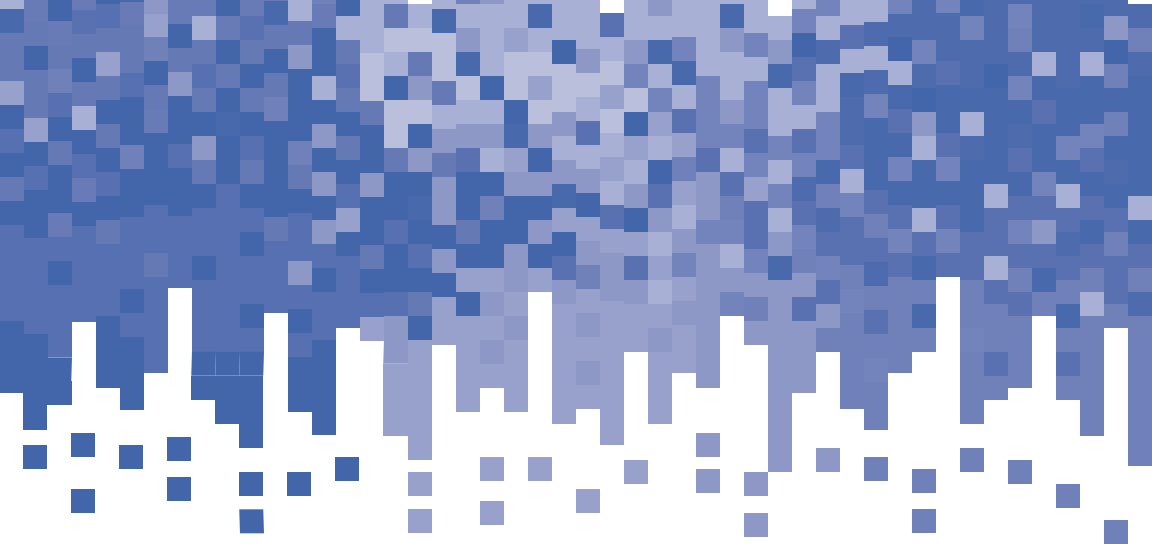
- Screen time is tough to measure accurately. Studies vary in their focus (time spent, specific activities) and measurement methods (self-reports, device tracking).
- Sample selection varies. Some studies use nationally representative samples, while others rely on more accessible groups or target specific subgroups.
- Technology evolves rapidly, often outpacing research, and long-term studies following young people into adulthood are scarce.
- Historically, much research has focused on North American, White, and college-age samples.⁵

To address these limitations, I prioritize insights from meta-analyses and umbrella reviews when possible. These “studies of studies” help identify important patterns and explain variation across studies. I also highlight research on underrecognized subgroups such as neurodivergent adolescents, adolescents of color, LGBTQ+ teens, and early adolescents. As you make meaning of the research, remember that you, your teen, and your context are unique.

I hope this book gives you a supportive developmental framework that holds up no matter what challenges you face or what tech innovations appear in future headlines. I invite you to bring this framework into your world and into conversations with your loved ones. I hope it helps you support healthy development by powering up relationships, skills, and opportunities—not just powering down devices.

As our kids move through online and offline spaces, they are engaging in the biggest and most important developmental task of all: growing up. Having a caring adult on their team matters much more than the latest app, chatbot, or platform. You have everything you need. Let's get started.





PART 1

“What Am I Capable Of?”

Built for Discovery

“Isn’t it odd, we can only see our outsides, but nearly everything happens on the inside.”

—CHARLIE MACKESY, *THE BOY, THE MOLE, THE FOX AND THE HORSE*

When I have conversations with adolescents about technology, I often start by asking, “What do you love most about technology?” and “What’s not working for you?” I like asking these questions for two reasons. First, I always learn something new. Young people are observant, insightful, and adept at figuring out innovative ways to make tech work for them. Second, I am constantly reminded that adolescents and adults have many of the same concerns. There are plenty of things teens wish adults understood better, but the idea that adults are hand-wringing while young people cling thoughtlessly to their devices is mistaken. Many of their concerns are related to how adults use technology. It turns out that adults and adolescents are in this together, trying to figure out answers to the same question: “How do we live well in a world dominated by screens?” Young people have a lot to contribute to this conversation.

■ The Adolescent Brain Is Not Broken

I had just finished setting up my computer for a student presentation at a large middle school in the Midwest. The auditorium was cavernous and quiet. To be honest, giant auditoriums are not my favorite settings for engaging with students. They don’t lend themselves to conversations that fuel learning and reflection. But

the principal had made a compelling case for bringing information about technology and the brain to the entire student body and promised that classroom teachers would follow up with more interaction.

Soon students started to trickle in. While most were happily immersed in conversation, one student approached me. I welcomed him, grateful to be able to talk one-on-one with an audience member before standing on a stage in front of hundreds of tweens and teens. As we exchanged greetings, I learned he was a seventh grader.

“Are you the speaker who is going to talk to us about our brains and technology?” he asked.

“That’s right,” I replied.

“So, is it true then that our brains are broken in middle school?” he wondered.

“Oh, no. I’m so sorry,” I responded.

“What do you mean?” he replied.

“Your brain is so far from broken. But I’m not surprised you’ve heard something like that. Not only is that story unfair, it’s also untrue.”

By that point, students were filling the auditorium. The seventh grader gave me a polite but skeptical look, clearly eager to rejoin his friends. He pushed back the hair falling over his forehead. “Listen,” I said before he left, “I’ll give you the short answer now, but I’d love to talk more after this workshop. Your brain isn’t broken; it’s transforming. And it’s built for discovery.”

I didn’t need to ask this middle schooler where he got the idea that his brain might be broken. References to vulnerable and out-of-control adolescents are everywhere. They show up in news headlines like “Watch Out! Teens Online Are Risky Business.” They also creep frequently into parents’ nervous conversations as their kids stand at the precipice of adolescence. Dr. Ellen Galinsky, author of *The Breakthrough Years*, surveyed parents about words they would use to describe the teen or adolescent brain. Sadly, only 14 percent of parents used clearly positive words.¹ When popular media discusses the science of the teenage brain, it often tells a simple story that blames the brain for all the teen behaviors adults find challenging—especially risk-taking online and offline.

The tween and teen years *are* rocky, and risky behaviors *are* part of the picture. Adolescent brain science does help explain and normalize some of the ground-shifting changes and behaviors that confuse teens and parents

alike. For example, we know that the prefrontal cortex is the brain's "orchestra conductor." The prefrontal cortex coordinates competing information and impulses from across the brain and helps people regulate their emotions. It is the brain's thoughtful decision-maker that helps humans engage in goal-directed behavior. And during adolescence, it is also the site of major construction and renovation. But the teenage brain isn't broken, compromised, or injured. Instead, changes in the adolescent brain prime young people for learning and discovery.

■ Adolescence Is a Window of Opportunity

When I do workshops with young people, I often ask, "Is being a teenager really that different from being a little kid? Everyone wants to talk about adolescence, but is it really that different from being seven or eight years old?" Nearly all nod their heads up and down emphatically. I often follow up with, "How is it different? What feels different?"

"It's way harder," some say. Others report, "It's way better," "There's more pressure," or "There's more drama."

Every human takes a unique path from childhood to adulthood. But the words and experiences that young people share about this journey tend to be similar. It is an emotionally intense time full of contradictory feelings and impulses. On the one hand, adolescents are ready for independence. On the other hand, they are nervous about it. They feel confident and prepared. They also feel unsure and overwhelmed.

These descriptions make sense considering what is going on inside the brain during adolescence. The human brain develops in fits and starts—not in an even, steady, uniform way. That's because the brain is modular, meaning certain brain circuits and structures govern specific brain functions. As children grow up, certain areas have periods of intense activity and development, while others remain relatively quiet. Then the quiet structures begin to develop rapidly, while the previously active ones reach the end of their growth spurts.

Although growth spurts happen at every phase of development, early childhood and adolescence are two critical periods of rapid change across the brain. During the first few years of my children's lives, I could practically *see* my kids' brains growing. Going from totally dependent to walking and talking felt like a

miracle. Spend any amount of time with a toddler or preschooler, and it's clear that their brains are constantly learning and changing.

Kids certainly learn and grow a lot in elementary school, but neurologically speaking, it's a relatively quiet period. That changes as they reach middle school. Just like the rapid change in early childhood, throughout adolescence the brain undergoes an extensive "overhaul and upgrade."² It is a series of major construction zones. These construction zones are shaped by a few key developmental processes: blossoming, pruning, and myelination.

The first two developmental processes are paired. At the onset of a neural growth spurt, the area of the brain ready for intense growth starts to overproduce dendrites. Dendrites are the branches at the ends of the neurons (brain cells). During a growth spurt, these branches go through hypergrowth. This is called **blossoming**. After this overproduction of dendrites, experiences take over the process. Experiences cause certain neurons to fire, and as they fire, the branch connections bridging one neuron to another get stronger. The branches that don't fire shrink, wither, and eventually disappear. This is called **pruning**. Experience, therefore, prunes or sculpts the circuits of the brain. Experiences during neural growth spurts, more than at any other time, shape the brain's neural networks and have a huge impact on the brain's wiring.

The third developmental process is called **myelination**. Myelin is a fatty substance coating the axon (cable) of each neuron. Myelinated axons transmit chemical electrical signals quickly and efficiently. Signals sent along axons that are not insulated with myelin are slower and more susceptible to electrical interference. The contrast is stark. An electrical charge travels one hundred times faster on a myelinated neuron than on an unmyelinated one.

These developmental processes drive dramatic changes in the brain from age ten to twenty-five. Through myelination, the adolescent brain is getting faster and more efficient as neurons in the brain become more effective at communicating with each other. Meanwhile, accelerated blossoming and pruning help overhaul key brain regions. This is why many neuroscientists refer to adolescence as both a window of sensitivity and a window of opportunity. During this time, young people explore and learn from the world around them. They form a sense of identity, purpose, and contribution. They learn essential skills for adulthood,

including healthy decision-making, emotional management, and relationship building. Changes in the brain prime young people for these essential tasks.

As the brain begins to undergo renovation during adolescence, changes don't always unfold evenly. Here's the catch: the emotional center of the brain goes under construction first, followed by the prefrontal cortex. The prefrontal cortex is responsible for planning, keeping goals and information in mind, managing big feelings, assessing risk, and making decisions. This means that newly super-charged emotions can sometimes outpace the more deliberative and thoughtful prefrontal cortex. This is especially true during emotionally intense or stressful situations. Researchers often distinguish between so-called "hot" (high-stakes) and "cool" (low-stakes) executive function skills. Hot executive function skills often lag behind their cooler counterparts. This helps explain why young people are often more capable of thoughtful decision-making in lower-stakes environments than in emotionally charged ones.³

The order of brain renovation also accounts for some of the intense and bewildering behaviors associated with adolescence when emotions are running high. Parents often ask their kids, "What were you thinking?" to try to make sense of their actions. It's just as common for kids to stare back blankly, unable to explain their thought process. They *are* capable of thoughtful and reflective action. They *aren't* trying to be difficult. But they are still learning how to regulate their behavior in hot situations. This can be as confusing for them as it is for their parents.

The intensity of adolescent emotions can be overwhelming to teens and to the adults around them, but these emotions are not a liability. Dr. Galinsky explains that these strong emotional reactions have unique benefits. During this stage, kids are moving out into the world, where they will need to navigate complicated social dynamics without constant help from adults. This means that they need to be "highly sensitive to social and emotional situations."⁴ According to Galinsky, strong emotional reactions position them to be the "emotional detectors" that they need to be to explore the world.

The Brain Gets Good at What It Does a Lot

The adolescent brain is primed for developmental leaps and growth, but too often adolescents' environments don't set them up for success. Teens today spend as

much time online as they do offline. Eight and a half hours *a day* with entertainment media⁵ is a lot of time. It's the equivalent of a full-time job.

Given how the brain grows and develops as shaped by experiences, it makes sense to pay attention to how adolescents' tech habits and activities shape their experiences while their brains are growing. What they're doing is reinforcing brain wiring for those activities. Conversely, what they're *not* doing is weakening other circuits. This is true of all experiences young people have during this window of opportunity.

Experience is not the only driver of brain development. Genetics matter as well. If you have children who are biological siblings, you can see firsthand how kids who share a lot of DNA can differ from one another. For example, my first child slept like an angel. As a naive first-time parent, I assumed this was due to my exceptional parenting. My second child slept like a rabid raccoon—in other words, not at all. I learned quickly that kids' behaviors and personalities are shaped by a lot more than just the experiences they have. There is a lot of natural variation, or neurodiversity, in how kids' brains develop, function, and experience the world. Being a parent means embracing neurodiversity and all the ways it shows up in ourselves and our kids.

For example, a teenager with attention deficit hyperactivity disorder (ADHD) might find it a lot more challenging to focus their attention amidst digital distractions. That's partly due to their genetics, or hard wiring. That same teenager might also use tools to help them stay organized, turn off their phone while they do homework, and take activity breaks to improve attention and focus. These strategies and experiences are called their soft wiring. It's important not to overattribute teens' behavior in either direction. Chalking up a challenge to genetics and a growing brain robs them of agency and opportunities for skill building. Likewise, overemphasizing experiences contributes to the harmful fallacy that all brain variations can or should be “fixed” with the right kind of practice. Adults should try to remember that a constant interplay between kids' genetics and experiences shapes how they show up in the world.

Nevertheless, environments and experiences are worth paying attention to. Neuroscientists often say that “the neurons that fire together wire together.” That is: the more often neurons pass on an electrical charge from one cell to another, the stronger the connections between those neurons become. This is

especially true while the brain is undergoing a growth spurt. A middle schooler playing a brand-new video game may frequently lose lives and strength. But after a few weeks, the moves feel automatic, and it is easier to advance through the game. Whether it is video games, math facts, music, empathy, managing feelings, impulse control, social communication, or sports, the brain gets good at what it does a lot.

Adolescents Aren't Unwise; They Are Developing Skills

Poor online decisions can be baffling to parents who have discussed internet safety tips with their kids. Many adults consistently share advice like “Think before you post,” “Be aware of your digital footprint,” and “Be kind online.” Indeed, most young people can recite these phrases quickly and confidently. Many add an eye roll for emphasis.

Young people do get it. Today’s adolescents have been raised with frequent warnings from parents and teachers about the risks they might encounter online and reminders of the long-term consequences of online missteps. Many could write a persuasive essay about online ethics and responsibility. Most young people use a variety of creative strategies to manage their online information and privacy.⁶ But they are still learning.

Hamza, parent of an eighth grader, pulled me aside before a workshop at his daughter’s school. “I just don’t get it,” he said. “We’ve talked about this over and over. She knows better!” He shared that his daughter had gotten pulled into an online conflict in a large group chat. The group chat started with light banter about an upcoming basketball game. It quickly devolved into hostility. A few kids left the chat, but many stayed on, including Hamza’s daughter. It became increasingly hurtful and ended late at night with promises of a physical altercation the next day at school. Hamza found out about it when school staff reached out to address the conflict that was now playing out in the hallways.

Hamza’s frustration may resonate with you. It’s helpful to remember that challenges like this are less about kids knowing what to do and more about kids managing feelings and building the skills needed to navigate complicated social dynamics.

The Teenage Brain Is Built for Discovery

Risk-taking isn't a "bug" in development. It is an adaptive feature. And honestly, it's necessary. Increased motivation to explore and try new things—to take risks—positions teens to tackle the risky challenge of growing up.

If kids' brains were built to hang back, consider all worst-case scenarios, and wait for total certainty before trying something, they might never leave home. Leaning into risk is key to positive development. While parents tend to associate risk-taking with negative outcomes, the UCLA Center for the Developing Adolescent simply defines risk as doing something when the outcome is uncertain.⁷ Risk-taking looks like and leads to many and varied things. For a young person, standing up in front of class to screen a short film on relationship violence and pointing out racism in a Discord server are risky moves. They are also filled with potential for learning and growth.

Growing up is full of uncertainty. The combination of a prefrontal cortex under construction and emotions in overdrive means that on balance, young people are motivated to forge ahead anyway. Indeed, research shows that teenagers do have a higher tolerance for ambiguity than adults have.⁸ The brain is built for discovery—even in the face of uncertainty. The good news is that the brain also learns from its experiences.

INSIDE INSIGHTS

Hamza's daughter likely didn't engage in the group text because she analyzed it, weighed the pros and cons, and thoughtfully decided to participate. Intense and stressful situations like this put a lot of demand on hot executive function skills. The part of Hamza's daughter's brain that helps her slow things down and consider alternative actions is still developing. Strong emotions can quickly override the more thoughtful and deliberative prefrontal cortex in higher-stakes scenarios. With more practice, she will get better at managing her feelings and accessing her prefrontal cortex during situations like this. Once things cooled down, Hamza's daughter was probably able to identify helpful response strategies such as leaving the chat, changing the topic, or talking with an adult about physical threats. With adult support and opportunities for reflection, such challenging experiences are exactly where young people build the skills they need to navigate future dilemmas.

“I will never forget what that felt like,” a tenth grader named Liam shared with me.

“What *what* felt like?” I asked. I could tell that it wasn’t a positive memory.

“It wasn’t a huge deal,” Liam went on. “But when I was in seventh grade, someone took a video of a kid crying in our class and shared it online.”

“Of you?” I asked, trying to clarify.

“No. Not of me. But sort of a friend. A class friend, anyway. It was free time, and everyone was just messing around, and things got rowdy. This kid stumbled into the edge of a table, and I think he for real hurt his leg. He went back to his table to get it together, but it was clear he was messed up about it. Instead of asking if he was okay, everyone just kinda laughed. I didn’t do anything. I just sat there and let it happen.”

“It makes sense that that isn’t a pleasant memory,” I agreed.

Liam said, “After school, I ended up talking it through with my dad. I eventually apologized to my friend for just sitting there. It ended up being fine overall, and the video didn’t go far. But it was a while ago now, and I still feel awful every time I think of it.”

I wouldn’t wish the emotional intensity of that memory or the suffering of the crying classmate on anyone. But the clarity with which Liam recalled this incident illustrates how teenagers often learn powerful lessons through experience. With help from a caring adult to make sense of what happened and plan for next steps, the painful episode turned into a site of reflection and repair.

The teenage brain remembers such experiences more intensely than an adult’s brain does. In the teen brain, there is more communication between the striatum (the reward center) and the hippocampus (the memory center). Elevated sensitivity to rewards also helps teens attend to new information. (More about this in chapter 2.) All this together means that adolescents are likely to form strong and specific memories as they get out and explore the world—even when they fail. Neuroscientist Dr. Laurence Steinberg argues that learning is more likely to stick during this developmental window.⁹

During adolescence, increased independence and exploration bring missteps and mistakes. These don’t always have to be painful. Successes and failures alike give teens valuable information about themselves and how they want to show up in the world. This information ranges from more benign things, like what