Understanding Algorithms, Attention and Our Brains

Why Do We All Find It So Hard to Put Our Phones Down?

- Have you ever picked up your phone to quickly check something and then realised 30 minutes has disappeared?
- Have you ever found yourself scrolling without really meaning to?
- Have you ever reached for your phone even thoughthere wasn't a notification?

If so, you are not alone.

Many people assume this happens because they lack self-control or discipline. In reality, modern technology is often designed to capture and hold our attention for as long as possible.

Understanding how this works can help us make more informed choices for ourselves and our families.

It Isn't Just Children
One of the biggest myths about screen use is that it is only a problem for children and teenagers.

Most adults have experienced:
- Endless scrolling
- Losing track of time online
- Checking notifications automatically
- Feeling distracted by their phone
- Reaching for their device during quiet moments

This isn't because we are weak.
It is because we are human.

Technology companies invest billions of pounds understanding what captures attention and what keeps people engaged.
The average person is not competing with an app. They are competing with thousands of designers, psychologists, behavioural scientists and data analysts whose job is to keep people coming back.

What Is an Algorithm?

An algorithm is simply a set of instructions that decides what to show you next.
Think of it as a highly attentive personal assistant.

It notices:

- What you watch
- What you click
- What you search for
- What makes you laugh
- What makes you angry
- What keeps your attention

The more time you spend online, the more information it gathers.
Over time it becomes increasingly good at predicting what will keep you engaged.

The Real Product Is Your Attention!

Many apps and platforms are free to use.

If we are not paying with money, how do these companies make money?

In many cases, they make money from our attention.

The longer we stay:

- The more adverts we see
- The more data is collected
- The more valuable we become to advertisers

This means many platforms are designed not simply to inform or entertain us, but to keep us engaged.

Why Is It So Hard To Stop?

Our brains are naturally drawn towards:

- Novelty
- Reward
- Social connection
- Curiosity
- Emotional content

Algorithms continuously provide these things.

They create a stream of:

- New videos
- New messages
- New updates
- New recommendations
- New opportunities for social interaction

Each one creates a feeling that something interesting might be waiting just around the corner.

The Slot Machine In Your Pocket

Psychologists often compare social media feeds to slot machines.
Not because they are identical, but because both rely on unpredictable rewards.

You don't know:

- What the next video will be
- Who might message
- Whether someone liked your post
- What news you might discover

Most of the time nothing particularly exciting happens.
But occasionally something does.
Our brains quickly learn to keep checking "just in case".

Why There Are No Natural Stopping Points?

Think about television twenty years ago.
A programme ended.
You got up.
You made a drink.
You talked to someone.
Today's technology often removes those stopping points.

Instead we have:

- Infinite scrolling
- Autoplay videos
- Endless recommendations
- Push notifications
- Personalised content feeds

The next piece of content arrives before we have a chance to decide whether we actually want it.

Why This Matters For Adults

Many adults now describe feeling:

- More distracted
- Less able to focus deeply
- More dependent on constant stimulation
- More likely to multitask
- Less comfortable with boredom

Boredom used to be a normal part of life.

Today many of us reach for our phones the moment we experience:

- Waiting
- Silence
- Uncertainty
- Loneliness
- Stress

Over time this can make it harder to sit with our thoughts, focus on one task or be fully present with the people around us.

What About Children?

Everything above affects children too.
The difference is that children's brains are still developing.

Adults have fully developed brain systems responsible for:

- Planning
- Decision-making
- Impulse control
- Managing emotions
- Delaying gratification

Children and teenagers are still developing these skills.
This means they are often navigating technology that has been specifically designed to capture attention before they have fully developed the ability to regulate it.

How Technology Can Affect Developing Brains

Technology does not "damage" every child's brain, the reality is more nuanced than that. However, children and teenagers are still developing the parts of the brain responsible for attention, self-control, decision-making and emotional regulation. Highly stimulating, algorithm-driven platforms can influence how these skills develop and are practised.

Focus and Attention

Many apps, games and social media platforms are designed to provide constant stimulation. Videos are short, content changes rapidly and there is always something new to watch, click or scroll to.

When children spend long periods consuming fast-paced content, their brains become accustomed to frequent novelty and instant rewards. Activities that require sustained attention, such as reading, problem-solving, listening in class or completing homework, can feel less engaging by comparison.

This does not mean children lose the ability to focus, but they may have fewer opportunities to practise the deep concentration that helps attention skills develop.

Managing Impulses

Impulse control develops gradually throughout childhood and adolescence.

Many digital platforms are designed to encourage immediate action:

- Click this
- Watch the next video
- Open this notification
- Respond now

Children receive instant rewards with very little waiting.

In real life, however, many important skills require patience:

- Learning a sport
- Practising an instrument
- Building friendships
- Completing schoolwork
- Solving difficult problems
-

When children spend significant time in environments that prioritise immediate rewards, waiting and delaying gratification can feel more challenging because those skills are being practised less often.

Emotional Regulation

Children naturally experience boredom, frustration, disappointment, sadness and anxiety.

These feelings are an important part of development because learning to manage them helps build resilience.

If a device becomes the automatic solution whenever a child feels uncomfortable, they may have fewer opportunities to learn other coping strategies such as:

- Talking about feelings
- Problem-solving
- Being creative
- Physical activity
- Using relaxation techniques

Technology can provide a useful distraction at times, but children also need opportunities to experience and manage emotions without immediately escaping them.

Sleep

Children's brains do some of their most important work while they sleep.

Sleep supports:

- Memory
- Learning
- Emotional regulation
- Concentration
- Physical growth

Late-night scrolling, gaming or messaging can delay sleep and make it harder for the brain to switch into rest mode. Notifications and the anticipation of online activity can also make it harder to fully switch off.

Social Skills and Real-World Confidence

Children learn social skills by spending time with other people.

Through face-to-face interactions they learn how to:

- Read body language
- Understand facial expressions
- Resolve disagreements
- Show empathy
- Build confidence

Online communication can support friendships, but it cannot fully replace the rich learning that happens through real-world interaction.

If a device becomes the automatic solution whenever a child feels uncomfortable, they may have fewer opportunities to learn other coping strategies such as:

- Talking about feelings
- Problem-solving
- Being creative
- Physical activity
- Using relaxation techniques

Technology can provide a useful distraction at times, but children also need opportunities to experience and manage emotions without immediately escaping them.

Sleep

Children's brains do some of their most important work while they sleep.

Sleep supports:

- Memory
- Learning
- Emotional regulation
- Concentration
- Physical growth

Late-night scrolling, gaming or messaging can delay sleep and make it harder for the brain to switch into rest mode. Notifications and the anticipation of online activity can also make it harder to fully switch off.

Social Skills and Real-World Confidence

Children learn social skills by spending time with other people.

Through face-to-face interactions they learn how to:

- Read body language
- Understand facial expressions
- Resolve disagreements
- Show empathy
- Build confidence

Online communication can support friendships, but it cannot fully replace the rich learning that happens through real-world interaction.

Children Learn What They See

Perhaps the most important thing to remember is this:

Children do not just learn from what we tell them.
They learn from what we do.

If we regularly:

- Scroll through meals
- Check our phones during conversations
- Reach for devices whenever we are bored
- Use screens right before bed#
-

Children learn that this is normal behaviour. The conversation about children's screen use begins with our own relationship with technology.

Questions For The Whole Family

Instead of asking:
"How much screen time is too much?"

It can be more helpful to ask:

- How does technology make me feel?
- Am I using it intentionally or automatically?
- Is it helping me connect or distracting me from connection?
- What is it replacing in my life?
- When was the last time I felt bored without reaching for a screen?

These are questions adults and children can explore together.

Taking Back Control

Small changes can make a big difference:
✓ Keep phones out of bedrooms overnight
✓ Turn off unnecessary notifications
✓ Create device-free family times
✓ Spend time outdoors
✓ Prioritise hobbies and interests
✓ Talk openly about how technology works
✓ Notice when you are reaching for your phone automatically
✓ Allow moments of boredom

Boredom is not something children need rescuing from.
It is often where creativity, imagination and problem-solving begin.

A Final Thought

Many digital platforms are designed to capture and hold our attention for as long as possible. If adults sometimes struggle to put their phones down, it is no surprise that children do too. The difference is that children are still developing the skills needed to manage distractions, regulate impulses and make conscious choices about how they spend their time.

By understanding how technology influences our attention, we can help children develop healthy digital habits while also reflecting on our own. The aim is not to fear technology, but to ensure that we remain in control of it, rather than it being in control of us.