



Growing Up Online

Sebastian Milbank

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First published: **October 2026**

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ISBN 978-1-912581-77-1

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Designed by Rubber Duckiee Ltd.

Printed in Great Britain
by 4edge Limited, Essex

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About the author

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Introduction

All of us want what is best for our children; to pass on a better world and a better sort of life to the next generation. Technology has done so much to increase human prosperity and expand the horizons of individual liberty that our attitude has often been one of naive optimism. The atmosphere in which the digital revolution took place, amidst the fall of communism and an explosion of global wealth, was one of boundless hope. It is little wonder, perhaps, that parents who wanted the best for their children put as much technology as they could into the hands of younger generations.

The natural desires of children and those of parents coincided. Young people want to be seen, to take part, and explore all there is in the world. Technology presented itself as a portal to a world of limitless possibility and pleasure. It didn't occur to many at the time, as Walkmans gave way to iPods and mobiles became Blackberrys, that we were all engaged in an unprecedented social experiment – one which would transform almost every aspect of life and shape the minds of a generation.

Two decades later, our children are growing up online. The proliferation of internet access, mobile data masts and smartphones has seen the penetration of technology into everyday life pass a new threshold. As of May 2024, the average UK adult spends 4 hours 20 minutes a day online – a quarter of their waking life.¹ By the time they reach the age of 9, UK children are averaging 2 hours online every day.² By the time they become young adults, they will average an incredible 6 hours a day browsing the internet.³

The internet, accessed through smartphones as well as portable screens like tablets and laptops, is now the primary resource for information, goods, services and activities. By age 7, 96 per cent of children use it, and by age 12, 99 per cent of them do.⁴ Not only are children spending more time online, but they are doing so with less supervision than ever before. According to an Ofcom survey, a third of UK parents of children aged 5–7 allow their child to browse social media independently, and a quarter of children of this age own their own smartphone.⁵ By ages 8–11, well over half of children own a smartphone, and by the time children are 12, ownership is ubiquitous.⁶

In 2026, we're amongst the first to be able to see the full results of the experiment. The first generation to grow up knowing only total connectivity – to grow up fully online – is now reaching adulthood. A child born in 2008, soon after the release of the first iPhone, would have been 10 when TikTok launched, 12 when Covid first struck, and now turning 18 just as AI has become as ubiquitous and powerful a tool as the smartphone itself – software that can talk to you, seemingly think for you and write your essays too.

The results are coming in, and they are extremely worrying. We know that young people across the Western world are reporting higher rates of mental illness than ever before; a trend that many, most prominently the social psychologist Jonathan Haidt, have blamed on screentime. Whilst the rise of depression, anxiety and other mental health problems reflect a trend that is almost certainly multicausal, there is also real reason to believe that other causes of youthful distress, such as sedentary lifestyles and reduced sociability, are themselves related to excessive screen use.

Is social media an addiction?

More troublingly still, there is mounting evidence that phones and social media are not only addictive but *designed* to be addictive. A major lawsuit in America alleging precisely this was recently decided against Meta, the parent company that runs Facebook and Instagram, accusing it of intentionally making its products addictive and harmful to its users. Meta subsequently reached an astonishing \$18 billion dollar settlement, and agreed to include time limits, warnings over screen time and more parental controls over children's accounts as part of the settlement, whilst denying any wrongdoing.

In the trial, medical experts testified that they were seeing 'an explosion of people presenting with addiction to a variety of different kinds of digital media, including social media' and that this was a 'worldwide' phenomenon.⁷ A cybersecurity expert testified that Meta's platforms had 'addictive' design features. Most damningly, he told the court that Meta was 'aware that addiction and problematic use was a concern on the platform'. Evidence was also shown in court of an internal presentation at Meta entitled 'Teen Fundamentals' which noted that adolescent's 'decisions and

behavior are mainly driven by emotion, the intrigue of novelty and reward’.

Throughout this report, reference is made to ‘social media addiction’. Addiction can be used in three senses: as a clinical diagnosis, a behavioural disorder, or as a sociological observation.⁸ Not all behavioural addictions are currently considered clinical diagnoses, so whilst alcohol and tobacco are listed on the DSM-5 as addictions, addictions to food and sex are not. This is because the criteria for clinical addiction is based on brain science, not on behavioural science – it does not mean that a person can’t be addicted to sex or food, or that such compulsive behaviour can’t have the same life-destroying effects.⁹

Instead, these are listed as behavioral addictions, often with the same therapeutic treatment and support group system as for substance abuse. However, many of these behavioural addictions are considered sufficiently analogous to a drug addiction that they end up being formally classified, as we saw with the recent addition of gambling addiction to the DSM-5. Already, the US Surgeon General has issued a warning that devices and tech platforms open up ‘a path to addiction-like behavior’, and treats screentime in general, not just social media, as potentially problematic.¹⁰

Social media addiction has yet to become a clinical diagnosis, but this may not be far off. Already, gaming disorder, a digital behavioural addiction analogous to gambling, has been added to the ICD-11, and is under consideration for addition to the DSM-5. A series of major studies have been conducted into the prevalence of social media addiction, with prevalence varying from 5% to 20%, depending partially on how high you set the bar for problematic use.¹¹ Even at the lowest bound, this is a worryingly high level of prevalence, especially for something that most of us use.

Beyond clinical and therapeutic definitions, we can also talk about addiction in terms of a wider social phenomenon – even where it falls short of ‘problematic use’, it still has negative impacts on our culture. As laid out in Anne Case and Angus Deaton’s landmark study on opiate deaths¹², which treated the problem holistically as one of ‘deaths of despair’ combining unemployment, poverty, and poor mental health with addiction, we can see social media addiction as a holistic sociological phenomenon — one that includes sedentary lifestyles, restricted childhoods, a youth mental health

crisis, all intersecting with a series of powerful technologies that substitute for human connection.

We thus find ourselves faced with the disturbing question of whether the technology in our pockets – and the technology we've so casually put into the hands of children and teenagers – is an intrinsically harmful and addictive product that may be doing more damage than we could ever have predicted.

Growing concern

According to YouGov, only 1 per cent of UK adults think that 5- to 7-year-olds should be allowed a smartphone, and only 9 per cent think that 8- to 10-year-olds should.¹³ Young people, when polled, profess extremely negative views about their own use of social media and the internet. Research by the British Standards Institute showed that 47 per cent of young people aged 16 to 21 would prefer to have grown up in a world without the internet, and 50 per cent supported a 'social media curfew'.¹⁴ 68 per cent of respondents also said they felt worse about themselves after spending time online.¹⁵ These findings are replicated in classrooms, with a 2018 report suggesting that a majority of heavy young internet users (defined as over 6 hours a day) believed they spent too long online.¹⁶ Evidently, there is a vast gulf between professed attitudes and actual behaviour.

As will be explored in greater detail in Chapter 1, numerous concerns surrounding excessive use have emerged in response to rapidly accumulating evidence of the harmful and addictive nature of the technology, especially gaming and social media apps.¹⁷ The 2021–22 *HBSC England National Report* revealed a drastic and long-term decline in sleep length and quality amongst teenagers, directly linked to the psychological and physiological effects of excess screentime, which in turn negatively impacts energy levels, schoolwork and mental health.¹⁸ Multiple studies have shown that heavier internet and social media use is correlated with seeing more harmful and inappropriate content, greater online harassment, and in more negative experiences online.¹⁹

Why, then, do young people and their parents continue to adopt it? Social media's addictiveness may go a long way in explaining continued use despite increasing awareness of its negative effects. But there are also external factors. Many young people cited 'FOMO' – fear of missing out – as a reason for persisting use²⁰, with

parents also citing peer pressure as a factor in their decision to buy their child a smartphone.²¹ The most commonly cited reason that parents cited, though, was the desire to stay in contact with their children, especially upon their entry into secondary school. This may explain why parents of young children were somewhat more likely to support smartphones at a younger age than the general public, with 4 per cent thinking it appropriate for a 5- to 7-year-old to have a phone as compared to 1 per cent of the public, and 14 per cent for 8- to 10-year-olds, compared to 9 per cent of the public. The perceived need to keep their children entertained was another commonly cited reason.^{22,23,24}

The slight divide between public and parents, in this context, appears to reflect the pressures that come to bear on parents as their children grow up. The power and benefits of technology – the ability to keep track of your child at all times, the emotional reassurance of communication, an easy way to calm or distract a difficult child – simply overwhelms any doubts parents have about giving their child a phone. In this context, a digital childhood looks less like a choice, and more like something that comes about by default through inertia and social pressure.

We fail to see the real nature and scale of the problem: perpetual connectivity to a system wholly controlled by commercial forces, a marketplace of minds capable of intruding into the most intimate of moments, and training and conditioning the youngest and most impressionable brains to a life of dependence on screens and technology. As we will explore in Chapter 2, so many present problems, from the mental health crisis to falling birthrates and growing illiteracy, can be traced, in no small part, to this encroachment of the virtual marketplace into our private lives.

A new approach

This report takes a clear line: though further research can and must be conducted, there is already sufficient evidence that social media and smartphones are distracting and encourage addiction-like behaviour by nature and by design. A strong response from every level of society is needed to protect children from the effects of this technology. Ideally, this response would be led by civil society, specifically parents, who in theory have the power to manage their children's screen use themselves. However, as Chapter 1 of

this report suggests, the young people often worst affected by technology tend to be those from families who do not yet realise its harms and are unlikely to impose limits themselves. It is not unreasonable to consider actions that the government might take towards protecting the most vulnerable or, at the very least, to raise public awareness of the risks posed.

Despite the extensive and worrying evidence, policymakers are struggling to keep up with a fast-changing social reality. The Online Safety Act (OSA) reflected a pattern of focusing on limiting harmful content through age verification processes, but the present limits are easily circumventable and difficult to enforce.²⁵ Britain is currently pursuing a social media ban for under-16s, and many countries are taking some form of action to restrict or limit the exposure of children to social media and smartphones, including France, Australia and Greece.

What is missing, especially here in the UK, are policy approaches that address the problem of screentime itself. A welcome start has been the widespread restrictions implemented by schools on mobile phone use, but the headline figure of more than 90 per cent of schools ‘banning’ phones is misleading.²⁶ Seventy-nine per cent of schools allow children to carry phones on their person during the school day as part of a ‘no see, no hear’ approach, and only eight per cent require that phones be handed in on arrival.²⁷ Despite the strong recommendation from the House of Commons Education Select Committee, a statutory ban has only very recently come into force.²⁸

Most frustratingly of all, despite offering a list of case studies including a variety of viable approaches, from handing in phones at the start of the day to banning them from school premises entirely, the most common form of ‘ban’, in which phones can be carried if they are not visible or audible, is not addressed at all. The guidance, even if now statutory, will achieve little if it does not explicitly rule out a form of ‘ban’ which leaves children with a smartphone in their pocket throughout the school day.

Screens and smartphones are ‘disrupting’ British education in more ways than one. Chapter 3 will consider not only the impact of external harms like porn, bullying and distraction, but the challenge of ‘edtech’ (educational technology). Big tech companies are seeking to automate and digitise education – while we seek to take smartphones out of classrooms, tablets and laptops are flooding in.

AI is already being used as a classroom tool and is destroying the integrity of coursework. Regulation and policy in this area is coming not only too slowly, but is often running in the wrong direction. Far from helping to limit screens, many schools are actively introducing screentime into lessons that do not require it.

Similarly, the plans put forward by the government to ban social media for under-16s have some merit, but many problems. The ban will be easy to circumvent in practice and hard to enforce, for precisely the same reasons as the OSA. It risks creating a ‘digital cliff-edge’ whereby children first encounter the compulsive and harmful elements of social media without parental oversight or having acquired good digital habits. It fails to engage or empower parents, limits the social benefits of connectivity for children, and doesn’t sufficiently address the overall problems of excessive screentime, or still more passive and isolating activities like streaming and gaming.

In light of these current efforts, this report sets out to argue for a holistic approach to the impact of technology on childhood. This at once means seeing digital technology, screens, social media and the internet as a single challenge, which must be dealt with at every stage and level, and uniting disparate and sometimes discordant areas of policy into a coherent shield that preserves the most precious aspects of childhood including education and family life.

This is an effort, as we will turn to in Chapter 4, that involves a whole-society approach and the unleashing of digital innovation domestically, as much as it means sensible limits and restraint in family life and education. The alternative to the ‘anti-social’ media of sedentary scrolling is tech that supports active lifestyles and helps us to navigate connectivity without being consumed by it. Greece has already shown a way to effectively empower parents and restrict underage social media use by requiring the use of a downloadable app. There is a role here not only for government regulators, but for parents, schools, digital industry and civil society.

Chapter 1.

A digital childhood

Public debate around social media and smartphone use has tended to fixate on negative externalities: exposure to porn, cyberbullying and body image issues. As a society we are starting to contend with the fact of connectivity and screentime as potentially addictive and harmful in themselves. Yet current criticisms do not go far enough in addressing the behavioural and social consequences of the technological revolution. What is happening on screens matters, but just as important is what is *not* happening.

A two decade-long annual survey of children's enjoyment of reading showed its lowest ever result this year, with only a third of children reporting that they enjoyed reading, and just over 18 per cent reading daily.²⁹ Only one in four children regularly play outside in their street or neighbourhood, and unsupervised time online is rising in direct correlation with the decline of independent time outside.³⁰ As well as disrupted sleep, screentime has promoted a sedentary childhood, with the average UK child getting less than 3 hours of exercise a week.³¹

Many benefits were imagined and hoped to follow from social media and smartphone use, such as 'digital literacy', improved learning outcomes, and a sense of community for children with a minority ethnic, sexual or gender identity.³² Yet the popular idea that 'digital natives' would, by sheer exposure to technology, be prepared to use it in the workplace tends not to be reflected in studies. Quite the opposite: studies show that the 'skills' learned on smartphones leave young people largely *unprepared* for the kind of technology and computer skills needed in corporate settings.³³ Other studies concede that it is 'active' rather than passive use of screens for shorter periods, accompanied with an active lifestyle, that produces the best results for all forms of learning, including acquiring digital skills.³⁴

Moreover, the idea that the internet provides a confidential and non-judgemental source of advice and community to troubled teenagers is complicated by studies that show that high social media use is an aggravating factor in poor mental health amongst LGBT youths.³⁵ Likewise, whilst research has been distorted and limited by extreme

political controversy, there is a growing body of evidence that conditions like gender dysphoria are strongly affected by social contagion, especially amongst young women.³⁶ This joins already well-established and widely accepted research about the role of the internet in other social contagions in areas like self-harm and eating disorders, where young girls and women are the most vulnerable.³⁷

Capturing the reality of online childhood is difficult. There is now more data on child and young adult technology use than ever before, which can feel as overwhelming as the world children and parents now navigate. The picture will also be largely determined by individual household circumstances and the attitudes of parents: depending on the education, social class and ethnicity of parents, the paths that unfold for children and their relationship with the digital world can look very different. There is strong evidence for a direct correlation, for example, between higher, problematic levels of screentime and lower levels of household income and education.³⁸ Poorer families and single-parent households all saw higher screentime for children, as did the children of black and non-university-educated parents. Taking this into account, a range of possible scenarios ought to be considered.

Three models of digital childhood

We can help structure our response to the challenge of technology by thinking in terms of three different, broadly defined ‘models’ of digital childhood: the ‘digitally shielded’, ‘digitally exposed’ and ‘digitally vulnerable’. These can be summarised respectively as the protective, clued-up families that limit tech; ‘typical’ families that set some rules around tech, if inconsistently; and the kids who we tend to really worry about: those glued permanently to screens.

‘Shielded’ children have parents highly alert to the risks of screentime and social media. These parents are very likely to restrict their own use of technology, live less sedentary lives, and read to their children. They tend to be university educated, well-off, and more likely to work jobs that offer flexibility, parental leave, and homeworking. Screentime is heavily monitored and restricted, devices are given at later ages, and they are more likely to associate with other parents taking a similar approach. Polling has shown that parents from richer households are 50 per cent more likely to be

‘very concerned’ about their children seeing adult or sexual content, for instance.³⁹

‘Digitally exposed’ childhoods probably reflect the majority of parents and children. Unlike shielded (or ‘digitally vulnerable’) families, this is also likely to be the most heterogeneous group, ranging from well-off, university-educated families to working-class parents. Parents in this category make efforts to restrict and regulate screentime and technology use, but are more powerfully influenced by cohort pressures. They are also less likely to regulate their own tech use, more likely to live sedentary lives at home, and less educated about the dangers of screentime, social media and devices. A child in this category is not unprotected, but they are exposed, usually unwittingly, to many dangers and risks. Parents in this group are likely to be concerned about technology, but less likely to act on or have detailed knowledge about its risks.⁴⁰ Children in this category may suffer comparatively few ill effects, but they are at a much greater risk than previous generations of poor attention span, loneliness, mental illness and eating disorders.

‘Digitally vulnerable’ families represent a minority of parents and children, but are the group exposed to the greatest dangers. This group is disproportionately likely to comprise single-parent households, children living in poverty, families impacted by drugs and alcohol, and ethnic minority households that experience language barriers and various forms of disadvantage. This is the group that gives children unregulated and individual access to devices and the internet at the earliest ages, often in the place of education, quality family time, or unstructured play. This group has extremely high, outlier levels of screentime at a younger age. Though subject to many other risk factors, problematic technology use creates an additional barrier to accessing education and escaping poverty or disadvantage. The most at-risk group of all are children in care, who lack a parent or permanent guardian to regulate their screentime or teach them self-protective behaviour.

A significant portion of vulnerable children, however, may be from otherwise ‘normal’ families with unusually relaxed attitudes to screentime and internet use. Regardless of background, digitally vulnerable children are being exposed to inherently damaging experiences and are the most at risk of online grooming, trauma from inappropriate content, addictive design features and online social contagion. These children are also a risk factor for their

cohort, as they are more likely to share this content and initiate other children into the darker corners of the digital world.

None of these conceptual models represent a judgement about the love or care of parents and caregivers. Wealth, education and social capital play a protective role for shielded families (and their lack for vulnerable families), with many parents unsure of what to do, or believing that technology is the least bad choice. For parents concerned about keeping in touch with children or worried about dangerous roads or local crime, devices that put parents in touch with kids and keep children calm and safely at home can feel like easy solutions.

Crucially, though, these categories *are not stable*. Children who are digitally shielded as infants often cease to be so as they enter primary school when both work and leisure rapidly shift onto screens. Children who are digitally exposed in primary school can end up digitally vulnerable by the time they reach the end of secondary school. Socioeconomic status, education and family stability are protective factors, but they become *less* so as children become older and technology becomes harder to police or avoid.

These three groups may help us to interpret the data and reporting covered in this chapter, and how we might shape policy to respond to it. Those trying to provide ‘digital shielding’ need institutions and support from wider society. The ‘digitally exposed’ are those families who would most benefit from a clear public health campaign, national guidelines, access to tools (such as ‘dumb phones’) with limited features, and communications from schools. ‘Digitally vulnerable’ children are those who most need the harder limits of statutory changes, regulatory-driven redesigns of technology, and direct interventions from GPs, school counsellors and social workers to help families make positive changes.

We can break down the impacts, risks and averages of the internet and screens on children in three different age ranges: 0–4, 5–11 and 12–18. Roughly, these reflect digital infants, digital children and digital teenagers, corresponding to pre-school, primary school and secondary school ages.

Age 0–4: Digital infants

Babies today are born into a digital world. New parents are already ‘digital natives’ who have grown up with computers, video games and internet access. The habit of photographing, filming, sharing and streaming intimate life moments is ubiquitous. Even before a child is born, its ultrasound image may already have been shared to family, friends or even the general public. One Twitch streamer made headlines by livestreaming the process of giving birth to her thousands of followers, reflecting a growing culture of permanent (and monetised) connectivity.⁴¹ Children and childbirth, like every other part of our personal life on social media, can become part of a game of competition, social status and profit.

From the very start, the relationship between parent and child is opened up to distortions and disruptions by the ‘attention economy’ of social media. Without realising it, modern parents are making deeply consequential choices on behalf of their child and setting the pattern for their future relationship with screens. Even before a child is old enough to tap, swipe or issue vocal commands to a device, they are intruding on their life and development in ways they may not realise.

The ubiquity and nature of smartphone use means that parents have a constant source of distraction in their pockets. This has led to a phenomenon dubbed ‘technoference’ by researchers, in which familial interactions at all ages are negatively impacted by the distraction of devices.⁴² This has particularly significant impacts on very early development, with ‘gaze following, joint attention, and parents’ responsiveness’ being crucial to language learning. Newborns and young infants demonstrate a preference for faces with a direct gaze – even the presence of TV or other screen a child is not directly watching has a distracting effect.

We do not have a fully clear picture of how prevalent screentime is for the very youngest children because researchers must rely on parental self-reporting, and the vulnerable segment of children are precisely the ones whose parents are not monitoring their children’s screentime. By definition, if parents aren’t setting sufficient limits, controls and oversights over screentime, they do not know how long their children are spending in front of screens.

But we can guess that these rates may be very high, based on an emerging picture of divergent outcomes between different groups

of children. Studies are beginning to reveal how soon educational and socioeconomic inequalities emerge based on the literacy, emotional and financial stability of the household in which a child grows up.

Studies have found that amongst 3- to 4-year-olds whose parents use devices for calming purposes, children are less cognitively developed: ‘weaker metacognition and overall executive functioning were associated with increased odds of parent-reported frequency of using devices for calming purposes’. This is a self-reinforcing cycle, as ‘young children with early executive functioning deficits may have more intense emotional reactions, more impulsivity, and less organised behaviour, making them more challenging to parent without using media’. Moreover, this effect was also found to extend to ‘educational’ apps and programming.⁴³ For infants, screens can inhibit development not only of language but of motor skills. Young children watching actions on screens show the ‘video deficit effect’, in which it takes them twice as long to learn to imitate the action than imitating a real-world adult.⁴⁴

Problems with infants in the ‘digitally vulnerable’ category emerge early. They tend to begin life in households where parents may themselves have unhealthy habits and relationships with technology. These are the children most represented amongst the growing numbers showing up to school without potty training, not having had breakfast or not having brushed their teeth.

According to a 2020 Department of Education report, ‘lower family income, lower primary caregiver education levels, and Black, Asian or Mixed/Other ethnic backgrounds were independently associated with higher screen time (combined time spent either watching screens or playing computer games) at age 2.’⁴⁵ The gap between those in the lowest versus the highest quintile was ‘179 compared to 97 minutes per day’ – nearly twice as high amongst the children of the poorest. And as one US study observed, amongst younger children, screentime of over 2 hours is associated with ‘increased likelihood of behavioral problems, delayed achievement of developmental milestones, and poorer vocabulary acquisition’.⁴⁶ The effect is strongest amongst those consuming more than three hours, meaning that the poorest young children in Britain are averaging at exactly the cliff edge of the most problematic use.

Not only is the relationship between poverty and high screentime amongst young children well established, so too is the relationship

between poverty and special education needs (SEN) status once children reach school.⁴⁷ SEN households were likewise found to be substantially more likely to have a child spending over three hours using a screen.⁴⁸ There is a real danger that poorer children, already disadvantaged by their background, are the most exposed to the developmental dangers of screentime, putting them on a trajectory towards SEN status and poorer educational outcomes before they even set foot in a school.

Age 5–11: Digital children

At age 5, most British children do not have a phone of their own. By age 12, almost all of them do. Whilst a previous generation of debate about phones and the internet focused on teenagers, the age of digital initiation has shifted decisively downwards. By the time they leave for secondary school, the average British child is a digital native, not a digital newcomer, and tech is already ubiquitous both at school and at home.

At school

When a child goes to school, their digital exposure is no longer determined entirely by what happens at home or at nursery. In the first instance, a child is exposed to the digital habits and expectations of their peers; if even one in four children own a smartphone at school, that means that every child on the playground has potential access to one.

This is also the age at which the relationship to screens and the internet changes. Amongst the youngest children, the biggest ‘social media’ app was YouTube,⁴⁹ where content is often marketed as ‘educational’. Children, especially in the ‘digitally vulnerable’ category, have generally already developed preferences, an ability to manipulate touchscreen technology, familiarity with search engines and the habit of watching short-form video content. Smartphones at school offer both a potentially less regulated venue for browsing content and a strong social contagion effect between peers.

These prior habits are slowly translated into a more ‘mature’ form of internet and screen use. Some of this, of course, is positive. Children at this age are starting to make videos, take photos, create

music and learn about the world via digital technology. All of these are greatly enhanced by structured and supervised technology use, either in classrooms or with a parent, and a number also benefit from being pursued in front of a fixed computer rather than using a smartphone or iPad.

Yet this is also the time when children graduate to entrenched problematic relationships with tech. This age range is when many children first experiment with setting up social media accounts, often before they are legally allowed to, with a majority of 8- to 12-year-olds accessing social media before the statutory limit.⁵⁰ Likewise, issues that are often associated with teenagers, such as exposure to porn, eating disorder content, cyberbullying and online grooming, are starting to affect pre-teens at higher rates.⁵¹

Almost all primary schools have policies against smartphone use. Since September, government guidelines restricting smartphones at school have become statutory. However, the guidance allows for different approaches of greatly varying effectiveness, from a complete ban to simply asking pupils not to take them out of their pockets. This last and least effective form of regulation is the most common measure, and alongside widespread reports of lax enforcement represents de facto toleration of smartphone use at school.

Meanwhile, some of the worst offenders in terms of screentime are classrooms themselves. The use of iPads and laptops in British schools has increased drastically over the past decade, with many primary schools integrating them into lessons. In some schools every child has been given a device, and it is commonplace for them to be taken home to be used for homework. Likewise, electronic systems have increasingly become the default mechanism for distributing timetables, marks and homework, and to manage a number of aspects of schoolwork and organisation. Some teachers rave about the technology, with a typical positive testimonial from one school describing how:

*My view and vision has been transformed. iPads have had an incredibly positive impact on children's enthusiasm and motivation and enhanced learning, to differing degrees, in every lesson of every day. I wouldn't want to teach without them!*⁵²

Yet there are also grounds for concern that these technologies may be doing more harm than good. There have been numerous stories of children, including primary-aged children, accessing extreme content on school-issued iPads.⁵³ Even with better filtering settings and software, the distraction factor of internet access suggests that ‘edtech’ is no such thing – it is a consumer technology ‘jury-rigged’ for classrooms, often designed and lobbied for by the same tech companies that profit from addictive-like behaviours. In response to these concerns, a number of high-performing schools have completely opted out of most ‘edtech’ outside of IT lessons, describing its use as a distraction.

The evidence, which will be considered in more detail in Chapter 3, is currently weak, partly because damaging forms of tech use are so powerfully correlated with other factors related to educational and economic disadvantage and can be difficult to disaggregate from exam results.

What we can say with confidence, however, is that the directly measurable negatives of high levels of screentime are extensively documented, whilst the evidence for the advantages of ‘edtech’ is so far extremely mixed.

If both peers and pedagogues are pushing screentime, the third source of trouble is parents themselves. The two most common explanations given by parents who purchase a smartphone for their child is the ability to keep in touch with them, and to access school services and materials.⁵⁴ Whilst greater parental conscientiousness is generally positive, overprotectiveness erodes children’s ability to self-regulate.⁵⁵

Phones offer parents the illusion of control and connection during the often emotional transition from home to school. From being able to call the nursery or drop by to pick kids up early, parents’ contact and control is reduced and constrained. Whilst more basic phones can in theory serve the same role, there are any number of reasons parents opt for smartphones. There is a sense that a child will need to have one at some point anyway, with their peers and often parents themselves relying on the internet to communicate. Parents and older siblings frequently have older smartphones lying around, meaning it can involve more effort and expense to purchase a newer but less functional phone.

Overinvolved and anxious parents want the maximal communication reach of a smartphone (which includes multiple chat functions and video calls), as well as options which include the ability to track your child's location. Fears of screentime and social media can seem abstract and unfounded – especially when these are ubiquitous and 'normal' features of life – compared to the visceral fears of a child being lost, injured or abducted without the ability to contact home.

At home

More and more schools are requiring or expecting homework to be completed digitally, rather than by hand, and at younger ages. Likewise, extracurricular learning can include videos, websites and online learning resources. Schools themselves increasingly provide laptops and iPads, many of which pupils take home. All of this creates a situation in which homework and playtime end up meaning the same thing: sitting in front of a screen.

Not only does this make it harder for parents to regulate the content and length of time children spend on screens; it puts them in the invidious position of having to make children engage with screens and technology in order to do their homework, undermining household limits on screentime from the outset. This means that even children in 'digitally shielded' households eventually become exposed and vulnerable to sedentary and exhibit addictive-like habits in relation to technology. Most of the worst problems will only emerge later, as we will see, when patterns established at primary-school age manifest in adolescent behaviour.

Just as educational technology normalises and drives screentime and device ownership amongst younger children, another major gateway into unhealthy screentime is gaming. Whilst video games can be educational and develop problem-solving skills, and is harmless in moderation, many have addictive-like properties.

Boys are the traditionally most over-represented category of children and teenagers suffering from gaming disorder, which generally emerges in adolescence.⁵⁶ The familiar story of boys socially withdrawing into a world of fantasy as teenagers – once mostly harmless – has been complicated by new developments. Whereas many 'traditional' video games in the action, role-playing

and strategy genres can be healthy, the world of the internet and apps has seen far more dangerous genres emerge.

So-called ‘casual’ games can appear less immersive and more harmless than complex console or computer games, yet are often amongst the most addictive and distracting especially when played on mobile devices. Mobile and tablet games are also the most likely to reach very young children, which is especially concerning given evidence that the earlier that a child starts regularly gaming, the more likely they are to develop problems, with the risks highest amongst under-6s.⁵⁷

As these games can be freely sold by companies of any size from anywhere in the world, they are often outside of the ethical, reputational and legal constraints of more traditional game studios. Whilst fears about video games have traditionally focused on sex and violence, these worries are often overstated and are in any case far less common and realistic than examples found in video content. The often-neglected factor, as will be explored in Chapter 2, is the degree to which new genres of game are being designed explicitly to have addictive-like properties and to encourage unhealthy behaviour.

Amongst the most disturbing examples are ‘games’ whose main purpose is to lure players through artificial rewards into spending money on in-game purchases. These ‘micro-transactions’, as with the gambling industry, rely on a minority of the most addicted users, and these games increasingly target children and adolescents, potentially setting them up for a lifetime of addictive behaviour.

Amongst the most addictive games are massively multiplayer online role-playing games (MMORPGs), which combine social networks with the immersive game world. Many of the most popular children’s games, like Roblox or Minecraft, though generally creative and age appropriate, integrate strong elements of social media. Similarly, many social networks have games built in, a feature which is extremely attractive to children and recruits them into social media use.

Casual and social gaming has shifted the traditional demographics of gaming more towards women and girls, and evidence is emerging that female gaming disorder is being significantly under-recorded.⁵⁸ Moreover, whilst boys are more psychologically vulnerable to

gaming, girls are more vulnerable to the dangers of social media, which is increasingly integrated with gaming.

If entertainment, education and socialisation are becoming more and more compressed into a single digital world accessed through screens, family life itself is far from immune. Whilst sharing images and messages with family via screens and social media can be a deeply important element of maintaining connection in the modern age, this positive role can embed screens in family life, or even end up replacing real-world meet ups and phone calls.

In the 5–11 age range, peer pressure typically has less influence than it will come to have in adolescence. As such, it is a crucial window for parents to model self-control, presence and attentiveness. When even shared activities and family time means being in front of a screen, the habit of healthily disengaging from technology may never be formed, meaning that children will prove less resilient as adolescents.

Age 12–18: Digital teens

We have followed the different courses of children from age 0–11. A large number started as ‘digitally shielded’, lacking the distractions and dangers of excessive screentime. But by age 12, most have smartphones and have become ‘digitally exposed’. They are not typically exhibiting severe behavioural or mental health issues, unlike some of the children exposed to unregulated screentime nearly from birth. But as children enter secondary school and go through puberty, this picture starts to change.

In adolescence, children should be beginning to develop their individual and social identities. Yet increasingly, this is being disrupted by the influence of technology, which all too often exacerbates insecurities, anxiety and anti-social behaviours. There is a strong body of opinion, most famously articulated by the American social psychologist Jonathan Haidt, that the growing mental health crisis amongst adolescents and young adults is directly caused by technological and social changes involving the digital revolution. And, if a child is going to develop severe lifelong problems, it is typically as a teenager that these problems are most likely to emerge and take hold.

Crucially, it is also the age at which children become most ‘visible’ to advertisers, media and politics. Whilst we talk a lot about the dangers of ‘radicalisation’ and grooming, we are often much less alert to the novelty of trying to define yourself and become an adult in the context of growing up with the full power of digital media and technology.

Normal exploration of identity – taking an interest in politics, having some money to spend on yourself, getting into fashion, going to the gym, flirting and dating, starting new hobbies and studying niche topics – can take a darker and more distorted form in this context.

Young consumers

One of the most concerning problems, discussed in greater depth in Chapter 2, is the degree to which digital spaces have become monetised. Social media presents itself as a free way to connect with friends, but it is in fact a highly profitable enterprise which makes its money primarily by selling advertising and personal information.

To make money, online platforms have to be able to show advertisers that they have a large and active userbase. This means that social media sites do not just need to get you to sign up – they also need you to engage as much as possible in order to maximise the amount of information you provide and the number of adverts they can put in front of you. This lets them not just offer advertisers eyeballs, but guarantee that they can precisely match adverts to their target market.

[One girl], now in Year 11, recently moved to a smaller school that allows her to focus more on dance, after deciding her previous more academically focused school was not the right fit. She prefers the more relaxed environment and one-on-one support, which her mum feels better suits her needs related to autism and undiagnosed ADHD symptoms.

She continues to dance regularly, attending classes three times a week and on Saturdays. Although she’s doing fewer hours this year, she’s learning more advanced routines and plans to attend dance college next year. Her Instagram dance account has grown to over 2000 followers, and [she] is interested in

growing it more. She gets advice from a family member, who has his own public Instagram account, about how to grow her following and increase engagement. Although she said she does not worry too much about how many likes her posts get, she did say she sometimes hides like counts on lower-performing posts.

Her screen-time has increased to over 9 hours a day on average, with TikTok being her most-used app. She still enjoys food, hair, and makeup content, mentioning the account Jellybean.sweets, a creator who eats food whilst interacting with viewers. She isn't very interested in news but recalled seeing BBC News videos about the Summer 2024 riots. She tends to trust verified accounts and checks comments or Google to verify information. She receives a lot of beauty advertising on her social media feeds, ranging from make-up and hair tutorials to cosmetic procedures including BBLs [Brazilian butt lifts] and composite bonding. She says she prefers sponsored content over ads, feeling it's more genuine if influencers use the products themselves.

– Response from a 15-year-old girl in North West England, in Ofcom's Children's Media Lives.⁵⁹

Teenagers are more influenced by social media than either adults or younger children, and it is as teenagers that 'brand loyalty' is most easily achieved and solidified. Apart from the economy of big beasts looking to snap up customers, there is a growing ecosystem of smaller actors: the so-called 'influencer economy' of popular individuals who sell products for brands to their followers. The incredibly powerful need for validation and belonging at this age, as well as the challenges of relating to peers as your identity is in flux, makes teenagers intensely vulnerable to this kind of marketing.

New forms of social media are in fact designed to distract and grab attention, creating the so-called 'attention economy' in which platforms compete to eat into your time. Whilst older platforms like MySpace involved creating a personal page – the online equivalent of the teenage bedroom wall – newer platforms comprise a

continual churn of new content with automatically updating feeds and ‘push notifications’ which cause your phone to buzz or flash. Perhaps the worst culprit is the ‘infinite scroll’ of short-form video content, in which videos automatically play one after the other, and clicking on a link automatically sees more of the same content load rapidly onto your feed. Social media is effectively ‘gamified’, using the same attention-grabbing and habit-forming mechanisms used in gaming to get people to stay on social media apps.

By 15, most children have been swept into a digital world, with gaming addiction typically developing at this point. It is also at this age that the divergence between our different cohorts becomes more apparent. If parents have managed to beat the odds and keep their children ‘digitally shielded’ – for instance, by delaying the introduction of regular gaming till age 10 – their teenage children will be much safer from developing a behavioral addiction. But children let loose on screens before 5 – the ‘digitally vulnerable’ infants – are at high risk of developing some kind of behavioural addiction or disorder.

Boys in particular are likely to form unhealthy relationships with video games and pornography. Even those who are not ‘addicted’ per se are often overly sedentary and socially isolated because they substitute for social connection and healthy, real-world relationships with the opposite sex. Exposure to crude sexual images and videos also distorts their expectations of sex and relationships, offering fantasies of sexual gratification and empowerment that can appear more compelling than those they would expect to find in real-life. The pursuit of increasingly extreme and addictive content can become a self-perpetuating cycle, reinforcing isolation rather than encouraging boys to engage with the world around them. If boys tend to retreat into technology as an escape from the demands and disappointments of real life, the consequences extend well beyond their consumption of individual forms of content to the displacement of real-world relationships and experiences.

These same online spaces create distinct dangers for teenage girls. Isolated girls are more likely to turn to social media and video content than to gaming and porn, but these platforms bring their own pressures. Female-dominated sites such as Instagram can function as sexual marketplaces, regularly linked to dating and hook-up apps and frequented by OnlyFans models promoting their work. Girls beginning to measure themselves and their bodies against others are consequently exposed to highly filtered, selectively presented

and AI-generated images, which can distort their perceptions of personal appearance and sexuality.

The ubiquity of smartphones and apps such as Snapchat has also created new opportunities for sexual pressure and exploitation. Teenagers may be pressured or persuaded to send sexual photographs or videos that can subsequently be shared or leaked, sometimes becoming part of a wider culture of cyberbullying. This is experienced more severely, though not exclusively, by girls, for whom the social and reputational consequences of online abuse can be particularly difficult to escape. The permanence and reach of digital content can make experiences that might once have remained private suddenly public.

Girls are also more likely to form parasocial relationships online, developing attachments to influencers, celebrities and other distant figures rather than retreating into solitary activities. More broadly, the exposure to acquaintances and strangers, rather than just close friends, makes bullying possible without the normal social consequences of face-to-face interaction. Anonymity and the unreality of online spaces create emotional distance, giving people permission to say things they would rarely express in the real world. The result is a digital environment that can intensify existing vulnerabilities while removing most of the social restraints that ordinarily govern behaviour.

Many teenagers experience mood and eating disorders due to all of these factors, some finding online ‘communities’ which reinforce insecurities and self-destructive behaviours: sites like TikTok and Instagram often aggressively promote eating disorder-related content to teenage girls.⁶⁰ Even clicking on a single link, post or video will cause more of this content to appear in your feed, and it is frequently shared within friend groups, making it hard to avoid. Similar patterns encourage self-diagnosis and self-medication, with a rise in individuals self-identifying as autistic, OCD, ADHD or chronically ill without consulting a doctor or psychiatrist.⁶¹

Relationships between boys and girls at this age can worsen due to online behaviours and perceptions, with some teenagers being recruited into extreme or radical political perspectives. The growing left-right divide between young men and women often begins in adolescence. Boys who are immersed in porn and violent games, struggling to relate to girls, are often attracted to the masculinity influencers and ‘incel’ (involuntary celibate) culture associated with

the online ‘manosphere’: the far-right subculture linked Andrew Tate and a variety of other influencers and spokesmen. Their views can range from legitimate and reasonably solid (though often misleadingly framed) insights into psychological resilience, health and human relationships, to conspiratorial ideas about women, politics and race, along with the thrill of tribalism and empowerment.

Yet, while less documented, radical progressive and feminist messaging are just as ubiquitous online and promote their own highly questionable dogmas around gender and so-called ‘sex-positivity’. In both cases, many political or politicised influencers recruit impressionable teenagers to ideological positions in order to build their own brand or to sell subscriptions and merchandise.

The longer teenagers do spend online, the more they are at risk of being sexualised, politicised and commodified. At the age at which young people should be starting to take charge of their own lives and define who they are going to be, they are instead being manipulated and defined by forces indifferent to their wellbeing.

All of this leads to worse life outcomes. The most obvious and immediate casualty of teenagers growing up online are young people reaching adulthood who do not read books, and, thanks to the influence of AI, increasingly cannot frame their thoughts or express their ideas.⁶² More and more young people opt out of the workforce altogether, with poor mental health driving a record uptake of sickness and disability benefit.⁶³

This imposes costs on society from lost labour and the long-term costs of helping and supporting young people suffering from mental health problems. Just as development is delayed by screens at younger ages, screen-addicted young adults fall behind key benchmarks in relationship formation, financial independence and starting a family. Who, then, benefits? Not society as a whole, nor parents, nor children – but the tech giants behind the digital revolution.

Chapter 2.

The marketplace of minds

The previous chapter addressed the medical, psychological and sociological evidence of the impact of screen use in childhood. The following chapter will zoom out, looking at the marketplace which governs and profits from children's screentime.

Responses to the internet, social media and screens in relation to children have failed to match the extremely rapid pace of technological, social and economic change. Not only have institutions and governments been left plodding behind the tech, but parents – the group we most rely on to regulate the habits of children – are often drastically underinformed.

A survey by the Information Commissioner's Office found that 24 per cent of primary school-aged children have shared their real name online; 22 per cent have shared personal information with AI tools; and that over a third of parents believed their child would 'share personal information in exchange for game tokens or rewards.'⁶⁴ Despite this, the same survey showed that nearly half of parents didn't feel confident protecting their child's safety online. This is a system rigged against parents and children, in which the user is more controlled than in control by default.

The Evolution of the Internet: A Timeline

- February 1996 – Telecommunications Act of 1996 passed in the US, deregulating the emerging internet
- March 2000 – dot-com bubble bursts
- November 2001 – launch of first iPod
- March 2002 – Blackberry phone launched, mobile phone use becomes widespread
- November 2004 – World of Warcraft launched, initiating a new era of online gaming
- April 2005 – YouTube launched, creating a new market of user-generated video content
- January 2007 – Netflix begins streaming services

- June 2007 – first iPhone released
- July 2008 – App Store launches
- April 2010 – iPad released
- October 2010 – Instagram launches
- August 2011 – Apple becomes the largest company in the United States
- November 2011 – release of Minecraft
- April 2012 – Instagram is acquired by Facebook
- September 2012 – dating app Tinder is launched, and dating apps will soon become the most common way that couples meet
- October 2012 – Facebook reaches 1 billion users
- September 2016 – TikTok launches, reaching 100 million users and 1 billion views a day within a year
- May 2019 – 5G internet rolled out in the UK
- March 2020 – Covid-19 pandemic begins, driving widespread adoption of remote working and learning
- November 2022 – ChatGPT released for public use
- October 2023 – UK passes the Online Safety Act (OSA)
- December 2025 – Australia bans under-16s from social media.
- August 2026 – Meta reaches \$18 billion settlement in youth social media addiction case

The rise of the digital marketplace

The history of the internet, devices and social media can be thought of as comprising three broadly defined eras. From the 1990s to early 2000s, the internet, household computers and mobile phones spread rapidly throughout Western countries. Then came the era of modern social media and the smartphone, beginning with the rapid growth of Facebook and YouTube and the launch of the iPhone in 2007, which reached its zenith from 2010–12 when Instagram was launched and Facebook reached its billionth user. We are now in the third era, where smartphones have increasingly displaced personal computers⁶⁵ and a new wave of social media has emerged, with platforms like TikTok (available in the UK from 2017) offering a more intense, ‘gamified’ and algorithmically optimised user experience.

This era has been accelerated by the rollout of fast mobile internet, the impact of the pandemic and the rise of AI.⁶⁶

This ‘three act structure’ – from prototype to growth to consolidation – did not come about unplanned. Few of the radical developments that have emerged were unforeseen or, for that matter, entirely undesired. When the Telecommunications Act was passed in the US in 1996 and deregulated the telecommunications and broadcasting industries, tech pioneers immediately took advantage and called for the arrival of a digital revolution. Thirty years on, we are seeing their ambitions materialise.

Shortly after the passing of the 1996 Act, an article was published by English media theorists Richard Barbrook and Andy Cameron entitled ‘The Californian Ideology’.⁶⁷ It is worth reading in detail:

At the end of the twentieth century, the long predicted convergence of the media, computing and telecommunications into hypermedia is finally happening ... When the ability to produce and receive unlimited amounts of information in any form is combined with the reach of the global telephone networks, existing forms of work and leisure can be fundamentally transformed. New industries will be born and current stock market favourites will be swept away.

They were, of course, entirely right. Crucially, though, the authors identified that this new economic model was not driven by technology alone, but by a certain ideology characterised by the ‘fusion of the cultural bohemianism of San Francisco with the hi-tech industries of Silicon Valley’, which ‘promiscuously combines the free-wheeling spirit of the hippies and the entrepreneurial zeal of the yuppies.’

As early as the 1980s, engineers like Peter T. Lewis were talking about ‘The Internet of Things’, whereby ‘the integration of people, processes, and technology with connectable devices and sensors to enable remote monitoring, status, manipulation, and evaluation of trends of such devices.’⁶⁸

When computer scientist Mark Weiser, in his 1991 essay, discussed the quest to make computers ‘ubiquitous’ and an ‘integral, invisible part of people’s lives’, he was describing what would soon become a settled ambition within an emerging commercial field, one that

would attract massive speculative financial interest and culminate in the dot-com bubble.⁶⁹

In *The Road Ahead*, published in 1995, Bill Gates describes the online advertising model whereby companies monetise user data and filter what you see based on algorithm:

*When companies know more about you, you won't have to look at advertising for things that don't interest you. And the companies will know that the right people are seeing the things they sell. Your computer will tell the companies about what you're interested in buying. Or what you're interested in hearing.*⁷⁰

Early in the development of the internet and computing, a clear and familiar vision crystallised and quickly proved to be immensely profitable. This vision was implemented by Google, Facebook and Apple, as well as a host of other companies and start-ups, many of which would end up being consolidated into the emerging tech monopolies. It consists of the idea that computing and the internet would be integrated seamlessly into every aspect of life; that as many functions as possible would be integrated into a single device; and that this device would be frictionlessly interchangeable with others.

Online, there would be a global marketplace in which every kind of digitisable human interaction would be possible – potentially between every person on earth instantaneously. These interactions, whether social, romantic or commercial, would themselves be optimised, rationalised and recorded by information monopolies which would in turn be able to monetise this role, most importantly through the sale and control of the new currency of this virtual marketplace: personal information that could be sold to advertisers and used to sell products.⁷¹

The vision came first, and it was achieved through gigantic investments of money, machinery and human capital. Technological barriers were broken down, and when new entities made breakthroughs, they were quickly bought up by larger entities which could employ new discoveries to perfect this larger model, a process that is still ongoing.⁷² Constraints on internet speed and data hosting were some of the first to go, alongside new frontiers in miniaturisation and the speed and storage of personal computers.

Later developments in cloud computing, data processing and AI completed the revolution.

The development of these technologies cannot be separated from politics: much of its earliest stages occurred during the Cold War with extensive state funding as Britain and America sought to counter the Soviet Union through control of superior intelligence, cryptography and communications.

Likewise, the conditions for the emergence of the online space in its current form owes much to the role of America's regulatory environment. Before the 1996 Act, telecommunications were governed as providers of utilities. But thanks to intense lobbying, new laws allowed the emerging digital economy to market online infrastructure as 'information services'.⁷³ The law also included the now infamous Section 230, which allowed companies to be treated as conduits for information rather than publishers. What this effectively meant is that internet companies could enjoy the same lack of editorial liability as telephone companies, but without the burdens and restrictions that other utility providers in areas like power, water and sewage had to bear.

Just as importantly, the vast capital requirements required for kickstarting a new digital industrial revolution were facilitated by financial deregulation.⁷⁴ The liberalisation of the financial industry, and artificially low cost of borrowing encouraged by federal reserve policy, fueled and accelerated the rise of tech companies through a glut of cheap credit.⁷⁵

Taken together with the professed vision of industry leaders, a very different picture emerges to the narrative of techno-determinism which has generally been presented to people in the media and popular culture. Communications technology breakthroughs made through massive state investment were monetised into a monopolistic market of information – a move that was only possible through massive deregulation and fiscal stimulus from the government of Bill Clinton, a politician who was funded by and closely allied with the tech industry.⁷⁶

This vast, state-backed digital industry would be instrumental not only to American economic growth (though arguably at the expense of traditional US manufacturing), but also the North Atlantic Treaty Organization's (NATO's) emerging War on Terror era security and intelligence infrastructure.⁷⁷ Having emerged from the defence and

security sector, Silicon Valley returned the favour by creating the conditions for the National Security Agency (NSA) and Government Communications Headquarters (GCHQ) to engage in mass surveillance.⁷⁸

Countries across the world have been disrupted and transformed by this revolution. The Arab Spring and the Maidan Revolution in Ukraine are often described as social media revolutions, in which civil society was able to spontaneously mobilise through social media.⁷⁹ But digital technology has also aided many oppressive regimes, with China employing digital surveillance and AI in its Social Credit system, whereby individuals are tracked, judged and punished.⁸⁰

An addictive product

If the modern networked, cloud-connected smartphone is the endpoint of a planned, state-facilitated digital industrial revolution, to what degree were its dangers and drawbacks possible to anticipate? To narrow our focus somewhat, beyond the well-rehearsed arguments over privacy, adult content and political polarisation, let's look for the moment at one question alone. Did the people who developed this technology know it could cause addictive behaviour?

As we addressed at the beginning of the report, the question of whether smartphones and social media *are* addictive is increasingly being answered in the affirmative by a large number of experts and policymakers: a systematic review of longitudinal studies from 2024 found numerous risk factors for smartphone addiction, while a parliamentary report suggested that a quarter of young people and children suffer from smartphone addiction.⁸¹ A series of landmark court judgments in America have also seen courts recognise that platforms like Instagram and YouTube are potentially addictive for young users, and similar legal claims may soon be made against other platforms.⁸²

Early writing and predictions around the digital revolution suggests that the potentially compulsive and sedentary properties of computing were already well known to people in the industry. Mark Weiser, in the same essay in which he called for computers to become an integral element of every aspect of life, noted 'the unhealthy centripetal forces that conventional personal

computers have introduced into life and the workplace’, and that ‘overzealous government officials and even marketing firms could make unpleasant use of the same information that makes invisible computers so convenient.’⁸³

Weiser was, however, an idealist, and hoped that computing could be ‘multiplied’ and developed in such a way that it could be integrated back into the physical environment. He dreamt of ‘machines that fit the human environment instead of forcing humans to enter theirs’. Weiser’s essay is instructive not only because he anticipated the dangers of digital technology, but because it demonstrates that other models of applying this technology were imagined and continue to be possible.

However, the vision Weiser espoused, often called the ‘Internet of Things’, did not survive the disruptive and profit-seeking imperatives of Silicon Valley. Computers would indeed become ubiquitous, frictionless and interconnected – but instead of restoring human focus and attention to our physical environment, they would seek to monopolise our time and attention in order to maximise the data we input, the opportunity to market products, and the competitive advantage of sites that could do this the most effectively.

There is strong evidence that tech entrepreneurs knew about this emerging trend and were involved in encouraging and profiting from it. Former Facebook executive Sean Parker has said that the early executives at Facebook were all aware of its addictive-like properties:

The thought process that went into building these applications, Facebook being the first of them...was all about: ‘How do we consume as much of your time and conscious attention as possible?’

Parker went on to describe it as ‘a social-validation feedback loop’, remarking, ‘God only knows what it’s doing to our children’s brains.’⁸⁴

In the same year, other industry insiders came forward to describe what they saw as the intentionally addictive properties of the software they helped design.⁸⁵ One Facebook project manager, Leah Pearlman, designed a plug-in to block her Facebook news feed and employed a social media manager so she didn’t have to engage with the addictive content.

This approach was consciously planned out, with numerous reports of behavioural psychologists and neurologists employed by tech companies to advise on how to keep users' attention locked on their products.⁸⁶ Others directly compared digital products to addictive substances. Aza Raskin, the software engineer who designed the 'infinite scroll' – which loads new content automatically, allowing for endless stimulation – described social media as 'behavioural cocaine'.⁸⁷ According to a former Facebook employee, 'Social media is very similar to a slot machine,' and trying to stop using it after leaving the company 'literally felt like I was quitting cigarettes.'

But it would be a mistake to focus on social media alone. It isn't just that smartphones and tablets facilitate social media use – the impact of having a mobile computer with access to vast amounts of games, distractions, shopping and social interaction constantly on our person has an inherently distracting impact, with studies showing that visible smartphones reduce our ability to concentrate even when switched off.⁸⁸ Video game designer and psychologist John Hopson compared the techniques used by game developers to 'make players play forever' with those used on laboratory rats.⁸⁹

As early as 2010, Steve Jobs revealed in an interview that his children hadn't been given the new iPad, and that he severely limited tech at home.⁹⁰ Silicon Valley workers were also amongst the earliest renouncers of technology, especially for their children. Montessori and Waldorf schools, alternative forms of schooling that emphasise traditional skills and personal development over tech-heavy curricula, have been popular for years with the tech set. California itself is also ahead of many other jurisdictions in seeking to ban or limit smartphones in schools.⁹¹

The possibility that tech expansion would fuel behavioral addiction was widely discussed in the 1990s, and by the 2000s, there was already evidence emerging that social media companies were making addictive products.⁹²

Marketing to children

If there is evidence that tech firms knew their product might be addictive, is there any indication that they knew it would end up in the hands of children?

We all know why companies market to young people. Younger consumers are more impressionable, have more free time, lobby parents for new products and shape popular taste. But the reason they are so relentlessly targeted (despite older consumers generally having more disposable income) is the holy grail of the advertising industry: brand loyalty.⁹³ Allegiance to brands is a potent mix of habit, sentiment, status seeking and social conformity. Some of the most successful and youth-focused brands drive feelings of identity and tribalism amongst young people, as we saw in the ‘console wars’ between rival gaming platforms which divided fans and provoked furious online arguments.⁹⁴

The aggressive marketing of products to young people isn’t just about creating new consumers of a particular product, but recruiting new consumers to brands. Apple built its success on relentlessly targeting younger consumers, including children and adolescents.⁹⁵ Though the iPhone is considered the breakthrough moment for Apple, the path to its success was paved through the iPod. Crucially, this was marketed to teenagers and children, with adverts featuring silhouettes of young figures doing the latest dances.⁹⁶ From 2004–2008, MP3 players and cell phones expanded to reach three quarters of American teenagers, creating a group of consumers well prepared for smart phone adoption.⁹⁷

The marketing of the iPhone likewise had a youth focus. An ad for the iPhone 4S, which came out just a year after the interview in which Jobs revealed he heavily limited tech at home, featured a young child lying on a bed chatting on an iPhone.⁹⁸ The pitching of the iPhone 4 to consumers, advertised a year earlier, featured games and Pixar movies and pictures of cute children, clearly intended to emphasise its role in family entertainment.⁹⁹ Even though Apple made the decision to keep social media at arm’s length, it is integral to its business model, and social media use features heavily in its advertisements for its devices.

Despite being a corporate behemoth, Apple built a counter-cultural image of its products as creative, youthful and individualistic, with a famous 1997 ad celebrating ‘the misfits’ and ‘the rebels’.¹⁰⁰ Nearly 30 years on, the advertising – and its manipulation of sentiment with slick, beautifully engineered technology – has done its job – with studies suggesting overwhelming brand loyalty amongst Gen Zs.¹⁰¹

This reflects two apparently contradictory effects of the digital revolution. On the one hand, tech is implicated in the fragmentation of the common experiences of mass entertainment and national cultures, selling hyper-individualised, curated experiences for users. Yet at the same time, social media has heightened conformity, helping to create an ersatz globalised culture.¹⁰²

This effect is a generation of younger consumers caught in what Ernest Hemingway mockingly described as a ‘uniformity of eccentricity’, with everyone being sold variants of the same subcultural experience. This world is full of illusions of choice, not least in the area of political polarisation, in which we are invited to choose between conflicting echo chambers. Online platforms have found ways to monetise both our need to belong and our desire to stand out.

Tech companies are at once helping to create an increasingly disorienting and fragmented culture, and profiting from the desperate desire for comfort and conformity this produces amongst younger generations, and driving contemporary intolerance, with evidence suggesting Gen Zs are less tolerant of social deviation.¹⁰³

It is a difference visible in the shift from earlier social media platforms like MySpace which were highly customisable, searchable and static, to the infinite scrolling, autorefreshing and algorithmically manipulated social media that now predominates.¹⁰⁴ Notably, these previous forms of social media were typically text and image-dominated, whereas they are now overwhelmingly short-form video dominated. One can easily imagine a different, more decentralised model of social media which converged with web hosting and blogging. But it was not to be, because it is a model that maximises user freedom rather than monetisation. Facebook overtook MySpace because, apart from its technical superiority, the site extracted money invisibly through the monopolisation and manipulation of time and attention, seamlessly integrating its advertisements into the experience of browsing.

These trends have intensified as rapid algorithmic feedback, short-form video content and ‘second screening’ – the ability to view multiple screen displays at a time – has seen social media platforms move towards even more hyper-stimulating and habit-forming models. Younger audiences remain the key demographic for this kind of content, precisely at the point in their lives where they are forming their cognitive habits.

Crucially, younger customers are not just the main consumers; they are also integral in the *production* of addictive content. The lure of fame and monetisation pushes users into producing their own content, videos, posts and images that won't pay off for the vast majority, but without which the platforms would have insufficient traffic to profit. Thus users are simultaneously the consumers, the producers and the product itself – at every stage, there is an opportunity for the platform to hold and profit from its audience's attention.

Young people are vulnerable to this not just because they are impressionable, but because they have greater free time. School and university students have reserves of time available for in-person socialising, shopping, hobbies, sports, study, dating, reading and travel – much of which now involves or is entirely mediated by screens. Time and attention are resources to be monetised and young people have the most ample supply. Capture that time and attention, and you can hold it throughout their lifetimes.

Social media is pernicious precisely because it is all-consuming and ever-present: young people 'live' online, and real-world activities are photographed and recorded for online curation and consumption. The intrusion of this commercially controlled medium into every element of life cannot be understated. Young people look at screens during social interactions and during lessons. At university, where the disciplines of school are relaxed, students spend much of their time in class browsing, shopping and, increasingly, outsourcing their note-taking and essay writing to AI.

In the online realm itself, one of the key drivers of traffic – and a way that users are retained and recruited – is through what can be called 'parasocial' experiences.¹⁰⁵ Influencers are a kind of low-grade celebrity, and within their online circles they share their lives, sell products and create drama in much the same way that conventional celebrities live their lives out in the tabloids. But what was once the province of a small number of people has become a mass market affair, and with over 67 million people around the world selling products and lifestyles, the 'creator economy' is already estimated to be worth a quarter of a trillion dollars.¹⁰⁶ Many of these influencers and their audience are young, and a not inconsiderable portion are children.¹⁰⁷ This has had a massive impact on the imaginations and aspirations of young people, with 57 per cent of Gen Z aspiring to be influencers.¹⁰⁸

What is happening is profound. Children are effectively being advertised to, used as advertisements themselves, having their information sold and monetised, and are directly recruited as salespeople.¹⁰⁹ Platforms not only passively profit through selling data to advertisers, but actively control and manipulate the experience of users, so that what is being sold as a free and neutral platform to exchange images, videos and ideas is actually a gamified, casino-like commercial space.¹¹⁰

Gaming itself is a key vector. Many games are not simply multiplayer, but involve persistent online worlds and social media-like functions; a number of social media platforms, such as Discord, are integrated with gaming. Gaming at once serves as a 'back door' that admits children into social media and social media-like spaces before they might otherwise be allowed or interested, and as a habituating mechanism for excessive screentime and for social media itself. Whereas gaming was once more often a real-world social experience, with children playing together on a console in the same room, the popularity of streamers has seen gaming become a passive, parasocial activity; one that more directly draws users into the world of influencers, social media and advertising.

Gaming has also moved away from computers and consoles, with the largest growth market being in mobile phone gaming.¹¹¹ Mobile gaming is typically more compulsive and mindless, with the capacity to engage the user's attention at every point of their day, intruding more directly upon sleep and family life. These games also tend to appeal more to women and younger children, and form part of a general pattern of collapsing all digital and digitisable functions onto a single device – a time and attention monopoly, ringmastered by tech giants like Apple.

Mobile games are not like the traditional video games laboriously developed by big gaming studios. They are simpler, cheaper and quicker to develop, and there are many more of them. But the most successful can eat into a player's time to an alarming degree. Whilst traditional games rely on plot and gameplay to engage players, and make their money at the point of sale, many mobile games are free to download, profiting instead from in-game purchases and engaging user attention through artificial rewards and addictive elements.¹¹²

There is a strong three-way relationship, then, between social media, mobile gaming and online gambling. Ideas developed

to exploit adult players by casinos both in person and online are adapted into mobile games, with continual ‘micro-rewards’ and the illusion of progress used to entice players to spend real-world cash.¹¹³ These same techniques are used by social media platforms, where the dopamine drip feed of badges, rewards and alerts flows in both directions.¹¹⁴

All of these things have inherent appeal to younger players and users. But gaming, unlike either social media or gambling, is less regulated and seen as less threatening by parents. The bright colours, simple controls and continual reward mechanisms do not just happen to be appealing to younger people – they are designed to be so.

As we see, what differentiates this kind of aggressive advertising from the sort of thing one can observe in toy shops, cinemas and shopping malls is how effectively it bypasses parental control and how ubiquitously it invades the time and attention of the child. Games and activities that may be harmless in themselves, or even creative and beneficial in moderation, can still be vectors of danger and disruption because of the medium of screentime.

Inappropriate content or malicious actors can infiltrate these apparently child-friendly spaces. Horror stories have emerged on seemingly innocuous gaming platforms, like Roblox, of widespread adult content available to young children, and cases of online grooming via the game.¹¹⁵

The boundaries between gaming, social media and advertising have all blurred, and the burden of policing these boundaries for children has been shifted heavily onto the shoulders of parents; parents who are drastically underinformed about the potential risks. Even for those who are informed, laboriously setting up parental controls and attempting to monitor and curate your child’s screentime is a task that many parents will feel they do not have the time for.

In response to social concerns about child safety and phone use rising, a number of smartphones are being marketed with built-in privacy, safety and monitoring features. Yet, whilst this should be an improvement on a fully enabled smartphone, no software can perfectly filter content or connectivity on an internet-connected device – nor can most of these features address the inherently addictive quality of social media platforms, mobile gaming, short-form video content and screentime itself.

In fact, the rise of ‘safe’ smartphones may quickly become part of the problem. Though they are marketed to children and promoted to parents by consumer advice writers,¹¹⁶ some of the most aggressive and open marketing to younger children is ironically enabled precisely by supposedly ‘safe’ phones.

One such example is the ‘Bark’ smartphone, which allows parents to block many functions and monitor a child’s activity. The website advertises many useful parental features for monitoring and restricting usage, accompanied by an image of a young child lying on bed scrolling on a phone alone – raising the question of whether this is a solution, or just another vector for compulsive, sedentary smartphone use.¹¹⁷ Such phones are clearly better for children than a normal smartphone. But there is a risk, as we saw with the Roblox example, that a perception of these internet-enabled phones as inherently safe may give parents a false sense of security. Equally, what could be a very useful tool for safely introducing older children to smartphones could instead serve as a way of marketing them to even younger children.

This goes back to an inherent tension in the debate over children and online safety. If social media is a ‘neutral’ medium and screentime has no inherent harms, then the problem of children and phones is only that of dealing with externalities such as harmful content; problems that are technically fixable through sufficiently powerful software. But if social media platforms are potentially designed to be addictive – and if smartphone use is *inherently* harmful for young people, especially at earlier ages – then the ‘safe’ phone may end up being part of the problem because it fails to address the more fundamental dangers of these devices and the behaviours they encourage. Parents hesitant over allowing devices may even be persuaded to give their child a phone earlier under the impression that it has been rendered harmless. The filtered and monitored version of smartphone use may be less dangerous, but could serve as a ‘gateway drug’ to more problematic use, drawing in children whose parents would otherwise delay smartphone use to a later age.

Such technology has a valuable purpose in a framework that recognises the inherent risks of social media and smartphones, but the most obvious demographic that needs them are older teenagers, or parents themselves – not young children who can be given flip phones for the purposes of phoning home. It also doubles down on the message that parents are responsible for controlling harmful

content, not internet service providers, social media platforms or mobile phone companies.

Nor are parents entirely innocent in all this. ‘Safe’ smartphones offer parents the lure of tracking and monitoring children’s browsing and physical movements, thus compromising their privacy twice over. Whilst parents are well-meaning in wanting to make sure children do not see harmful content and wishing to know where they are, technology offers an unhealthy amplification of this protective instinct. Jonathan Haidt has linked the youth mental health crisis not only with the rise of the smartphone, but also the connected decline in ‘free-range childhoods’, with fearful helicopter parents keeping children physically safe but mentally fragile.¹¹⁸

Children’s privacy may also be compromised by parents who promote their own social media ‘brand’ and income by filming and photographing their children – such as the classic ‘stage mom’ or ‘dance mom’ who runs their young child’s social media accounts for them.¹¹⁹ Instagram is rife with social media accounts for child and teen models and influencers, many of whom are subtly or not so subtly sexualised, despite being run or monitored by their parents.¹²⁰ The lure of fame and cash is not just a moral hazard for impressionable children, but for attention-hungry parents too.

Even amongst the best-intentioned parents, it is easy to unconsciously recruit children into social media content, a phenomenon sometimes dubbed ‘sharenting’.¹²¹ Just living in a normal social context means family photos on Facebook, and though this involves relative privacy, that neither extends to advertisers, nor always ends with these more ‘private’ forms of social media. It only takes one well-meaning friend or relative to publicly share a photo or video to breach the wall.

Merely the presence of social media and smartphones makes intimate family spaces more performative, more sedentary and more passive.¹²² Family time ends up meaning screentime, and that screentime is increasingly fragmented. The more traditional categories of the family film, TV show or boardgame – which bridged generations and created common experiences – has increasingly given way to individually curated experiences.¹²³ This move towards individuation makes perfect sense commercially, as it multiplies the profits made, data gleaned, and individual attention captured. Yet for families and society at large, it is corrosive and exploitative.

The extraordinary power of communications technology has broken down once-solid barriers, blurring boundaries between private and public, adults and children, social life and the market. In the face of the sheer scope and penetration of digital technology, everyone from parents to policymakers has been rendered confused and helpless. We increasingly talk about these technological changes and ‘disruptions’ of industries, communities and families as if they were forces of nature, to which we can only adapt and conform.

Yet there is now substantial evidence that the extreme commodification of online spaces and the addictive, distracting qualities of screens were elements not only anticipated but intended by those who designed them. In order to make money, a marketplace of minds has been built – a marketplace that advertises to, commodifies and recruits children into itself at the youngest imaginable ages. Parents are put in an impossible situation, forced to choose between opting out of ubiquitous and socially expected technologies on behalf of their children, or simply accepting that their child will be inducted into this new monetised parasocial reality of competition and commodification.

Yet in identifying this reality, we are already framing a solution not available to us if we think in terms of deterministic technological change, or of risk in terms of externalities. As Chapter 4 will explore, policy – instead of trying the impossible task of policing only the midpoint between potentially harmful platforms and vulnerable users – should instead focus on source and destination. At source, platforms should be made safer and less addictive by default, so that children encountering them are less likely to become hooked in the first place. Likewise, the inherent risks of screens and hyperconnectivity should be officially recognised by public health bodies, with government, school, family and civil society-based responses designed to delay and restrict screen use amongst children.

Chapter 3.

The crisis of the educators

Having looked at the impact of technology on children's lives and the profitable trade currently underway to monopolise their attention, this chapter will consider the role of schools and educators. It offers a context for measuring the impact of these trends, asking whether schools have been part of the problem, and considering what solutions and responses are emerging.

We have some idea of what schools are dealing with from the evidence in Chapter 1. We know that almost all pupils have smartphones by the time they arrive at secondary school, and that older children and teenagers are suffering the most extreme and visible effects. We know that children are turning up sleep deprived, anxious, and unable to pay attention.

Schools are a valuable source of information for the emerging social picture of the digital childhood. Primary schools have been reporting alarming rises in children who have not undergone basic developmental stages, from potty training to toothbrushing.¹²⁴ A recent survey of 1,000 schools in Wales and England included reports of children unable to climb the staircases and having speech rife with 'Americanisms' resulting from excessive screentime.¹²⁵ A Centre for Social Justice report found that there were 800,000 under-5s using social media in some form, despite age restrictions.¹²⁶

Initially, Covid got the blame. But as time has passed since the pandemic, increasing evidence suggests that Covid only accelerated pre-existing trends, acting as a catalyst for long-term higher levels of screentime and related parental neglect.¹²⁷ The power of screens to act as 'digital pacifiers' means that young children do not make the same demands on parents' attention.¹²⁸ This is naturally appealing to stressed parents, but the result is children who do not communicate their needs or explore their environment, which drastically slows their natural rate of learning and development. In the early years, play, song and babytalk from caregivers are an extremely efficient form of education, teaching motor, speech and social skills – the more they are replaced by technology, the more such skills are endangered.

Amongst older children, inappropriate content is rife. Thirteen is now the average age for first encountering pornography, but many are now exposed far earlier.¹²⁹ One young woman described being ‘addicted’ to porn from the time she was 11.¹³⁰ She is not unusual, with a tenth of 12 to 13-year-olds reporting that they fear they are ‘addicted’ to online pornography.¹³¹

The Online Safety Act (OSA) has placed a technical barrier between children and access to porn; especially for younger children, this may make some difference.¹³² However, it is a barrier readily breached by VPNs, non-compliant websites and access to adult devices. As explored in Chapter 1, it only takes one child in a year group to breach that barrier for other children, as a recent story of a group of Scottish boys readily foiling their school’s internet security to share porn illustrates.¹³³

Beyond the act, policy responses have focused on the role of schools and sex education, reflecting a widespread orthodoxy amongst much of the educational and therapeutic establishment around sex education as the preferred policy response to pornography. There has been a flurry of recent reports and experts pushing for greater education and ‘media literacy’ for children, and for these interventions to occur earlier. The issue, of course, is that there is little difference between the recommendations of today and those of 10 years ago. A 2025 report by Baroness Betin essentially rearticulated the recommendations of the 2016–17 Women and Equalities Committee report; recommendations that were carried forwards in government legislation that extended personal, social, health and economic (PSHE) education to all schools and included guidance on relationships, gender and pornography to the curriculum.^{134,135}

The continuing stories of earlier and more problematic porn use amongst children and teenagers a decade on from these measures is clear evidence that this approach is ineffective at delaying or preventing access to porn. Indeed, despite the strong feminist emphasis of relationship and sex education (RSE) over the past 10 years, there is little sign that it has curbed abusive behaviour in men and boys. During the period following the reformed curriculum, there was an 89 per cent increase in the newly recognised offence of online grooming, much of it driven by Snapchat, and most of it targeting girls, including those in primary school.¹³⁶ Whilst adult predators are an understandable focus, much of the worst pressure

in the culture of sexting involving children and adolescents comes from other children, and it is rife in British schools.¹³⁷

There is clearly a role for education, including sex education, in preparing children for the reality of the online world and the dangers of porn use. Yet there are problems with freighting sex education with so many politically fraught projects, from correcting misogyny to preventing domestic violence to treating trauma due to early porn use.

The assumptions of sex education proponents tend to be overly optimistic about the role of education in ‘equipping’ children to ‘navigate’ porn through increased ‘literacy’, yet pessimistic about the chances of delaying or limiting porn use altogether. A typical perspective in *Psychology Today* led with the idea that children are ‘going to watch it no matter what we say’.¹³⁸ A similar assumption can be found in British educational circles, with one ‘porn literacy’ proponent emphasising the importance of ‘acknowledging that most young people will encounter it’ and suggesting the solution is not to prevent children seeing it, but instead to ‘critically analyse what they see in pornography’.¹³⁹

Sex education is dominated by certain unquestioned dogmas. It fails to take on board evidence from other domains and promotes highly politicised views unlikely to be shared by every parent or educator. For one thing, moral language is excluded, as is a sense that there might be anything wrong with pornography as such. From this assumption, the reality that children are often upset, harmed, or even traumatised by pornography poses a problem. If the assumption is to survive, then the explanation for childhood harm is shifted onto the child and their lack of understanding. As the *Psychology Today* article argues:

*Porn is a product made for adult consumers. It features images, words, metaphors, and stories that young people can't comprehend as they were intended. Lacking real-world experience as context, most kids have no reason to think that porn isn't real. And without media literacy—understanding the basics of how media are created, and how consumers are shaped by the media we consume—kids typically don't deconstruct the imagery and emotions that make porn so powerful.*¹⁴⁰

This emphasis on media literacy is central to the 2025 independent review on pornography by Conservative peer Baroness Betin. According to this approach, children must be taught ‘the right knowledge and skills to navigate this content should they see it.’ There is a resistance to seeing any problem with porn itself, with the author to the report desperate to:

... be clear that I do not approach this subject from a prudish or disapproving position ... I believe that people should be able to do whatever they want if it doesn't harm anyone – and that includes safely consuming adult content that has been made by consenting adults.¹⁴¹

The review includes praise for ‘Ethical Porn Producers’ and, though referencing porn addiction, fails to centre the potentially addictive properties of pornography or to link it with problematic screen and internet use. The emphasis throughout is on distinguishing ‘harmful’ pornography from what must, we are left to conclude, be ‘harmless’ pornography. This means that contemporary approaches to pornography are focused on ‘unrealistic’ expectations, body image, violent porn and gender roles. This ‘deconstructive’ approach to porn does little to address its addictive nature; the inherent harms of developing a voyeuristic sexuality at a young age; or the way in which porn locks users further into wider addictions to screens and virtual worlds.

Schools have been able to exert little control over a burgeoning social media-driven culture of over-sexualisation amongst teenagers. Normal challenges of puberty are magnified and publicised to an unprecedented degree. Instead of playground rumours, girls now potentially face intimate texts, photos and videos being shared against their will. Porn use is widespread and creates unrealistic and dehumanising norms around sex. More subtly, social media changes the atmosphere around desirability, relationships and intimacy.

Adolescence isn't just a time when teenagers reach sexual maturity – it is also when social awareness intensifies. This is the reason that they start to become easily embarrassed, obsessed with fitting into peer groups and vulnerable to wider social pressures. Social media and smartphones ‘supercharge’ this normal process, making adolescents feel that they are being judged on a far larger stage than their school, and that they are always *on* that stage.

The consequences for not fitting in, being embarrassed or making a mistake can feel permanent and universally visible. Even mentally healthy adults can buckle under that kind of unnatural pressure – for teenagers, uniquely at the mercy of social disapproval, it can be lethal.

Though the most extreme outcomes are a small if very real possibility, other, long-lasting consequences affect entire generations of young people.¹⁴² There is strong evidence that the social and psychological effects of intense screentime and social media have produced longer-term issues. Higher rates of mental ill health, lower levels of employment, greater social isolation and fewer romantic relationships are all growing problems amongst younger generations, and have all been credibly linked with social media and screen use.

One of the most significant tangible examples of the digital social experiment gone wrong is the way that dating has been marketised and monetised through ‘dating apps’. There is evidence that substantial numbers of children breach age verification measures to access them.¹⁴³ The risk of grooming is a serious concern, but the relationship norms that porn and dating apps inculcate amongst teenagers are also deeply troubling. Age verification cannot protect 18-year-olds still at school, and dating apps and porn are heavily integrated with social media platforms used by much younger teenagers and children such as Instagram, Snapchat and X.¹⁴⁴

Confusing and complicating these issues around sex, relationships and technology are new political and social movements on both the Left and Right. Feminism, itself a significant aspect of the curriculum and government policy, is often seized on by girls as a response to contemporary sexual culture. Well-meaning attempts to empower girls and promote respect towards women can go awry as girls embrace sometimes-confused ideas around ‘sex positivity’, gender identity, and radical self-ownership.

On top of this, so-called ‘gender ideology’ is a divisive and challenging development, with schools forced to decide how to respond to pupils identifying as the other sex (or neither) and demanding the use of new pronouns and names. Likewise, they are also having to deal with the radicalisation of boys through the online ‘manosphere’, as well as the startling rise in children, particularly girls, being influenced by online ‘communities’ that promote eating

disorders and self-harm, and encourage the self-diagnosis of depression, anxiety, OCD and autism.^{145,146}

Schools have a unique challenge but also a unique role to play when it comes to these emerging trends. As the main point of connection between parents, children and the public sector, they are a place where policymakers may hope to effect positive changes in children's development. Fundamentally, schools must acknowledge their role in shaping children's behaviour, character, social habits and attitudes towards relationships. It follows that they ought to have a clear ethos when it comes to technology, though there is room for a legitimate variation of approach

Unfortunately, the culture of most British schools today undermines this. Progressive ideas of individual identity and autonomy, reflecting biases in the teaching profession and teacher training courses, increase the vulnerability of children to outside pressures, especially in the context of phone and social media use. An ethos of individualism can also allow children to become overly introspective and isolated, alienating them from other pupils and their parents.

Rather than slowly and organically developing an identity of their own, teenagers are uniquely predisposed to adopt identities 'wholesale'. In itself this tendency can be harmless, but social media raises the stakes of such natural experimentation and can lock children into adult identities they do not fully understand or are unprepared for. The role of schools should be neither to affirm nor to deny the identity of pupils, whether in terms of gender, sexuality, religion or politics. Instead, schools should be a haven from the pressure to perform an individual identity, a place where everyone wears a common uniform and pursues the common purpose of learning and growing together.

School should be a 'low stakes, low pressure' environment when it comes to identity, with the inherent fluidity and transience of youthful relationships and identity formation allowed to take its natural course. Strong standards of behaviour and discipline, joined with clear restrictions on entry of the adult world's pressures and preoccupations, define school as a place of not only physical, but psychological and intellectual, safety.

When, on the contrary, schools continually affirm that children have rights, autonomy and an inviolable self-defined identity, they

unwittingly create the pressure and expectation to individuate oneself – often in children not yet ready or prepared to do so.

New technology has not only created new challenges around identity and social media but has also started to compromise learning in more fundamental ways. Apart from the well-rehearsed issues of sleep, attention span and mental illness, pupils are increasingly using large language models to write and edit their work, including homework and coursework.^{147,148} The problems of internet-enabled plagiarism have risen to new extremes, with children able to generate unique essays at the press of a button. Research skills are lost when AI is the first and last point of call for any question, despite its tendency to lie and mislead. Even more worryingly, declining rates of reading and literacy seem likely to worsen as pupils use AI to simplify and sum up texts rather than deeply engage with them. AI offers a continually available shortcut, present on every laptop, tablet and phone.

Schools have left themselves vulnerable to the disruptions of tech, not only by moving too slowly on smartphone restrictions but also by unthinkingly adopting technology. There is a widespread social assumption, only now being fully challenged, that new technology is at once positive and inevitable; that everything which can be digitised should be, and that children must be exposed to technology in order to gain mastery and fluency with machines in some future economy.^{149,150,151}

As discussed in the previous chapter, many leading figures in the technology industry did not share this pedagogical philosophy, instead opting to send their children to schools where children learned through using their hands and exploring nature. Even as this was the case, tech companies aggressively marketed their technology to schools, distributing free laptops and tablets in order to create a customer base and profitably digitise education.^{152,153}

While there can of course be genuinely educational uses for technology, that potential is all too often suppressed by the distraction and nuisance quality of how most devices, software and platforms are designed and used.^{154,155} The unprepared and untutored child is unlikely to make the most out of online sources and then becomes faced with the dizzying prospect of near infinite choice.

The internet-enabled aspect of screens is the most disruptive and the most readily abused. But screens in general are highly stimulating, distracting and can hinder tactile and embodied learning. Many schools and educators, as with the Forest school movement,¹⁵⁶ are already experimenting with more exploratory, real-world and tactile learning.¹⁵⁷ Whilst educational philosophy has long acknowledged the cognitive diversity of children and in learning approaches, technology has done little to cater to kinaesthetic and social learners. There is a danger that teachers facing declining standards of behaviour are following parents in using technology as a digital pacifier, even though the mental passivity it imposes is fatal to the attentive listening needed to retain ideas.

Perhaps the most seductive element of so-called ‘edtech’, however, are the tools that teachers themselves use. Platforms that allow pupils to track and submit homework assignments, as well those that let teachers monitor classroom computer activity, give the illusion of control and appear to relieve tiresome labour. This subtle ‘gamification’ of education is appealing, but there are dangers and drawbacks.¹⁵⁸ Whilst online systems, from buying books to booking flights, can get us to what we need faster, they also have the power to change how we think and behave. The ability to buy items or organise holidays in moments makes us less deliberative and is subject to subtly recursive manipulation by advertisers.

In the same way, edtech risks shifting the relationship between teacher and pupil, increasing the distance between them. Rather than physically assigning or handing in work and directly giving or receiving feedback, the pedagogic process is depersonalised. The question of whether we *should* automate learning comes to the forefront here, as schools embrace automation without a clear sense of why.¹⁵⁹ Even the simple matter of such interactions can be educative, for they qualitatively charge the relationship between teacher and student. Eye contact, body language and physical presence imbue education with psychological substance and weight. As in other areas of life, the pandemic accelerated digitisation, but the shift has not reversed, even when the original reason for it has gone.¹⁶⁰

This digitisation of education is expensive and directly profits tech companies. Educational software is initially offered to schools for free but comes with limited functionality, leading them to eventually pay for upgrades. As the saturation of such software increases and becomes backed by state policy, companies like Google are then

free to increase prices.¹⁶¹ The same pattern of free rollout followed by monetisation is clearly being attempted with AI, as AI education tools are being offered free to many students and institutions.¹⁶² Equally, all of these systems rely on expensive hardware like tablets and laptops, which often have to be purchased for every individual child.

Such schemes prime pupils to interact with the world through digital systems, adapting them to the virtual world and potentially creating more social anxiety around real-world interactions. Though we naturally emphasise social media, entertainment, gaming and porn, the ‘practical’ applications of digital technology have many of the same issues. As discussed in Chapter 1, work and education-based screentime is often treated differently than consumption or leisure-based use, but the effects are not necessarily far different, especially when distractions are ever-present in internet connected devices.

At present, schools have taken a number of different approaches. The first instinct of many schools when phones came along was not necessarily negative. Indeed, many schools, wedded to a prevalent culture of technological determinism, wanted to appear ‘modern’ and accepting of new technology, including smartphones. In 2020, the headteacher of one English girls’ school argued that we ‘demonise’ mobile phones, that they have positive uses, and that:

*They’re not going to go away, we can’t be Luddite about it, we can’t stick our heads in the sand and hope that time will turn it back, because it won’t. They’re here to stay.*¹⁶³

But today, even that school – while remaining on the permissive end of the spectrum – has a restrictive phone policy, with younger pupils having to hand phones in and older girls expected to keep them turned off and put away at all times – in line with current government guidelines, albeit the least-restrictive tier available under the guidelines.¹⁶⁴

More than 90 per cent of British schools have some kind of ‘ban’ on mobile phone use.¹⁶⁵ This, however, does not guarantee that children do not have a phone on their person, that it is switched off, or that it does not emerge under a desk, in the bathroom or in the playground when a teacher isn’t looking. And that, of course,

assumes that the policy is consistently enforced and in a form that deters pupils.

How committed schools really are to a ban is hard to assess. In the absence of a stronger standard of smartphone restriction, included in the statutory guidance, there will be reluctance to commit scarce time to enforcement, with a recent survey reporting that 100 hours a week are lost on trying to deal with smartphones.¹⁶⁶ The survey, though small, showed limited positive results from stricter policies, taken in isolation, for children. As Professor Victoria Goodyear from the University of Birmingham and Chief Investigator of the SMART Schools Study explains:

School phone policies, whether permissive or restrictive, are a huge drain on a school to enforce. The high proportions of teacher time spent managing phone use or phone related behaviours during the school day is potentially being diverted away from other types of wellbeing promoting activities, such as pastoral support or extra-curricular activities. We therefore need new ways of approaching adolescent smartphone use in schools.

Another major development that is potentially outflanking some of these questions is the rise of online schooling, also accelerated by the pandemic. For many homeschooling parents, and those whose children have special needs and are reluctant to travel long distances to specialised schools, online education has an obvious appeal. Yet many of the platforms that offer it are very new, profit-making entities that serve international markets and have received relatively little scrutiny in the press (outside of some carefully placed promotional stories boasting of their inclusivity and avoidance of bullying).¹⁶⁷

As UK homeschooling regulation is already a grey area that frequently catches out parents – and as there have been a rash of scandals involving illegal schools¹⁶⁸ – this should be an area of intense concern and scrutiny, especially with its greater potential for children to fall, unobserved, into screen dependency.

As awareness of the risks of social media and smartphones has increased, a number of schools have been moving ahead of government policy, attempting a variety of more restrictive

approaches on mobile devices and social media – a shift now increasingly being backed by the government.¹⁶⁹ Whilst action has been slow, there is a statutory ban on phones in school, which came into force in September, and the recently concluded consultation looks set to drive a variety of ‘restrictionist’ policies including a planned social media ban. As discussed, however, there are real limitations to crude bans, especially when not backed by a holistic approach.

The government’s vision for technology in schools has been somewhat contradictory, and it is unclear where it now stands under Andy Burnham. It has been slow to adopt stronger policies on smartphones, only recently making the ban on phones statutory and leaving schools to continue an inadequate ‘no see, no hear’ approach. This may change, but the wider problem is that in spite of government policy restricting mobile devices, it has been actively in favour of putting more of every other kind of device into classrooms – chiefly internet-connected tablets and laptops. Indeed, the government is currently working closely with tech companies on implementing AI throughout the public sector, including schools.

Other countries are already moving quickly and engaging with the issue of screens directly rather than focusing on social media alone. In France, official guidelines have been laid out for when it is developmentally appropriate to expose children to screens.¹⁷⁰ For professionals working with children it is ‘forbidden to expose a child under 3 years of age in front of a screen (smartphone, tablet, computer, television) given the risks to its development’. Letters are sent by the French healthcare system to every parent of young children with benchmarks for different ages:

- *before 3 years: no screen, even when lit in the background;*
- *between 3 and 6 years old: very occasional use, with an adult, to watch adapted content;*
- *at any age: never screen during meals, before sleeping or to calm the child.*

Some countries have also thought more deeply about how restricting social media for children is to work in a practical way, and how parents can be engaged in the process. In Greece, the social media ban is being implemented via an app, which parents are required to download onto their child’s phone.¹⁷¹ Greece has pushed for the EU-wide strategy in which 15 is recognised as the

'digital age of majority'.¹⁷² There are a variety of other approaches that have been tried by other countries, as surveyed in a recent Civitas report.¹⁷³

Chapter 4.

Growing up offline

Thus far this report has considered the impact of growing up online from the perspective of parents and children in Chapter 1; from the standpoint of the digital marketplace in Chapter 2; and from the point of view of educators and policymakers in Chapter 3.

When it comes to policy surrounding youth access to screens, smartphones and social media, there is understandable reluctance to propose intrusive intervention. Especially following the implementation of the Online Safety Act (OSA), many have noted that the regulation and policing of technology is often ineffective – because it can be easily bypassed by VPNs and other loopholes – and concerning from the perspective of privacy and data protection.

Others are reluctant simply because the invasion of technology into all areas of life, including childhood, now seems inevitable. There is a certain sense of technological determinism that permeates our thinking about these issues, not just in the media, but in public policy circles too. The language of the Department for Education treats technology as both positive and inevitable.¹⁷⁴ There is an assumption, also, that digital tools in classrooms will make children more prepared for the future workplace. Policy is moving reactively in regard to growing public awareness of the harms of screens and social media, but it lags far behind the real picture.

A fine balance has to be struck between government regulation that strengthens the hand of consumer, family, school and individual, versus those that instead become another source of surveillance and control. All too often attempts to regulate online spaces have fallen on the individual citizen, with policemen harassing members of the public for lawful speech, and governments using the digitisation of private speech as an excuse for its regulation.

Any future approach must shift the burden onto those who profit from rather than those who use social media and screens. Equally, civil society itself should be seen as the primary enforcer, regulator and first responder to the challenges and dangers of screens when it comes to children. Parents, teachers and children should not

only be protected but empowered to build a new and better offline childhood.

Though there now looks set to be stricter regulation of social media and smartphones at school, government policy is at odds with itself. One type of screen is being banned in classrooms, but the Department for Education is poised to unleash more of every other kind, alongside a more automated, digitised and AI-integrated curriculum. Civil servants are still briefing ministers that there is a ‘digital divide’, years after mass penetration of technology was a settled matter in Britain.¹⁷⁵

Behind all this is a deeper, almost philosophical issue: people, especially (and ironically) older people, are deeply invested in a narrative of continual technological and social progress. Admitting that the domination of much of the population’s waking lives by screens and perpetual connectivity is an inherently negative development undermines this entire narrative and the business model of digital capitalism.

As we saw in Chapter 2, there is serious and growing evidence that the addictive nature of this technology is a deliberate feature. Early proponents of the digital revolution often imagined an ‘explosion’ of functions that would be integrated into separate screens, objects and tools, rather than the ‘implosion’ of every possible function into a few perpetually buzzing, intrusive screens kept on our person. Notably, an early goal of more idealistic computer scientists was for this technology to ‘disappear’ into the fabric of our ordinary lives, rather than distracting from and displacing those lives. The current form of this technology is inherently disabling, because it undermines the tactile and bodily elements of our thought and work.

Politicians tend to believe it is better to ‘keep up’ with such developments than to futilely resist them. Yet, as we saw in Chapter 3, skills like coding are already potentially declining in relevance thanks to AI. An emphasis on psychological resilience, character, and timeless, transferable skills would be a vastly more adaptive approach, and one ironically better reflected in traditional and ‘classical’ education than in faddish, technology-driven curricula.

Disabused of assumptions about the intractable and inevitable nature of technology, we are liberated to see clear ways forward. Trying to ‘keep up’ with tech passively leaves us perpetually behind the curve when Britain’s public and private sectors should

be working together to democratically shape digital technology to serve the common good. Whilst inevitably this is a long-term project, in the short-term law and policy can positively shape tech and limit its harms.

Policy recommendations

A public health approach

Official guidelines

All the evidence we currently possess on the harms of screens, smartphones and social media should be used to inform formal public health guidelines, just as we currently have for alcohol and smoking. There should be clear guidance issued by Public Health England and the Department of Health and Social Care about the risks involved, and recommendations for the maximum amount of time spent online or in front of a screen. This guidance should be broken down by age, with explicit benchmarks and recommendations depending on age group, just as is currently done in France. The government has begun to move in this direction, publishing screentime guidance for the first time recently, but a more systematic approach is needed. This could involve (as with the French example) guidance and rules for childcare professionals as well as parents, along with systematic communications with the public, such as a letter from the NHS for every parent of a young child.^{176,177,178}

The most neglected aspect of current approaches is a failure to pursue a holistic strategy engaging parents, civil society and the private sector in helping schools achieve meaningful change. Efforts in schools are frustrated at home, whilst parental strategies fall apart in schools. Both parents and schools, likewise, are fighting an uphill battle against a culture that normalises problematic screen use and a market that profits from it. As with the effort against smoking, or in favour of seatbelts in cars, only a socially unified approach can drive a dramatic change in collective behaviour.

What might this look like? The smoking ban worked because it was founded on a strong regulatory framework, with social enforcement driven by legal compliance, and was accompanied by expert-led public health campaigns. A vital element of this campaign was

to show the harms that extended beyond the individual, with a particular emphasis on those posed to children.

Rather than enforcing total prohibition, the ban created easily understandable and enforceable rules around where you were allowed to smoke. In the same way, by giving a clear geographical and spatial dimension to a smartphone ban, government can aid enforcement and create a stronger social message. Schools, in this context, become the ideal place to develop and promote a wider social strategy of warning about, limiting and improving potentially harmful digital technology.

Parallel guidance which applies these recommendations to specific sectors should be issued by relevant branches of government, especially the Department for Education. Anyone who works with children, from nursery staff to pediatric nurses to carers, teachers and social workers, should be familiar with the guidelines, communicating them to parents and applying them to their own work.

In these guidelines, artificial distinctions between different types of technology should not be made. Internet-enabled smartphones, laptops and tablets can all host the same kinds of apps, and all have the same distracting and addicting qualities. Screentime itself, taken as the amount of hours every day spent in front of an internet-connected screen – whether for entertainment, work, education, social media, shopping or any other function – should be taken as a whole, though consideration should be given to the uniquely distracting nature of smartphones.

Particular weight should be given to the behaviourally addictive, distracting and time-monopolising quality of screens and social media, with physical as well as psychological impacts identified and publicised in any guidance. The specifics of such guidance should be determined through research and wide consultation with subject experts in psychology, education and health. Although more research should be conducted, the current state of evidence already gives a strong enough basis to act in the following areas.

Guidance should include the earliest developmentally appropriate age at which different kinds of technology should be available to children, for how many hours, and under what level of supervision. It should strongly recommend that children under the age of 16 not be given personal devices, other than ‘dumb’ or very basic phones,

in order to shield them from adult content, grooming and the risks of behavioural addiction. The use of devices as ‘digital pacifiers’ in early years should be presented as absolutely unacceptable and uniquely harmful.

Porn and gaming addiction should be given real consideration as medical and psychological conditions, and should be part of a public health approach. Similarly, the problems of peer pressure and the ability of the internet to produce ‘social contagion’ of mental health problems like eating disorders must be both investigated and integrated into any strategy.

In public messaging, emphasis should be placed on the positive benefits of delaying and limiting the use of screens and the internet, particularly at a young age. Alternative, non-sedentary hobbies and sources of entertainment, most importantly reading and exercise, should be promoted. Bringing these ‘offline’ elements back into childhood is just as crucial as reducing reliance on tech.

A public information campaign

These guidelines should be widely publicised, with tailored guidance designed for educators, healthcare professionals, parents and children themselves. A television and internet campaign with videos, posters, leaflets and other accessible literature should be a priority, promoting the message that excessive screen and social media use is potentially harmful. Celebrities, children’s authors and entertainers should be engaged and recruited to bolster these efforts, with existing campaigners (such as the actress Sophie Winkleman) being given a prominent role.

The aim of such a campaign should not only be to increase public awareness of the issue but, as with smoking, create new social attitudes. Harmful and already disliked social habits such as people staring at their phone during meals and in social settings, could, like smoking inside, be targeted. As with the anti-smoking campaign, children should be a particular focus. ‘Avoid excessive screen use around your children’ should be as clear a message as ‘don’t smoke around your children’. Schools should be a focal point, with a clear message that social media and smartphones do not belong in classrooms or playgrounds.

The advantages of this approach over a simple ban or law change is that it recruits and empowers the public as agents of reform, and

also creates easy-to-understand boundaries. Whilst seeking to legislate individual behaviour can be seen as attacking freedom and infantilising adults, childhood is a well-understood social exception. Likewise, by designating schools as an ‘offline’ space, just as smoking is banned inside, we create a clear and easily enforceable boundary.

Schools should lead the way, not just in banning phones but in publicising the new guidelines, modelling an ‘offline’ life and educating a new generation about the potentials and risks of new technology – as well as the advantages and personal enrichment to be gained by replacing social media use with reading, sport and creative activities. Guidance about screentime, social media and devices, including the issues of adult content, privacy, addiction and sleep hygiene, should be better integrated into the existing personal, social, health and economic (PSHE) curriculum, which at present makes no mention of porn or social media addiction.¹⁷⁹

GPs and hospitals should take a central role, leveraging their strong position of public trust and the opportunities they have to positively shape childcare. New and expecting mothers and fathers should routinely be given guidance on screentime and devices, in the same way we inform new parents about vaccines, diet and post-natal care.

These resources should also be shared along with training for nurseries, childcare professionals and those involved in pre-school care and education, with professional good practice around limiting screentime extended to these contexts.

Offline schools

Parental covenants

There are many successful approaches to limiting screens in schools. The case studies provided in the strengthened 2026 Department for Education guidelines provide an excellent snapshot of what these can look like, from ‘pouches’ that seal away phones to bag-free schools.¹⁸⁰ Thus while this report recommends continuing the statutory exclusion of phones from school, there should be plenty of room for schools to take an approach that works for their context and pupils.

That said, there are approaches to phones that are likely to be ineffective and counterproductive and should be explicitly excluded by government policy. In the first instance, smartphones need to be physically absent; policies that simply rely on children having phones switched off and out of sight (the situation in the majority of schools) are inadequate. Importantly, apart from the obvious problems of enforcement inherent to phones being physically available to children, there is research that suggests that even knowing that your phone is present and available harms concentration.¹⁸¹

Policies that ban or limit the use of phones in schools are important, but they have their limits. Because such policies cannot address smartphone use at home, they cannot guard against many of technology's harms or resolve the issue of peer pressure – and, as we saw, it is largely because of peer pressure that many parents give into letting their child have a smartphone and use social media in the first place. Far superior is an approach where schools and parents work together with one another to create a culture in which technology is decentred, in turn removing pressure to adopt it between peers.

In one school where this has been tremendously productive, parents have been encouraged to sign a 'contract' agreeing not only to back the schools strong policies against phones, but also to encourage limitations on and healthy relationships with technology at home as well as at school.¹⁸² By restricting phones from the school gates and after-school activities as well as the school day, the school went beyond just classroom management and attempted to create a culture around the school in which social media and smartphones were limited and subordinate to in-person, embodied life and education.

The Department for Education should mandate that every school create a framework for a phone-free 'offline' school culture that protects children from the pressures, distractions and dangers of social media; one that should include agreements with parents. In developing this approach, schools should first launch consultations with parents so that the process is consensual, democratic and, ultimately, may be seen to work in their interests as much as the school's.

Such agreements are already beginning to develop organically as schools react to growing public awareness and concern about the harms of screens, smartphones and social media. This should be

encouraged; while national policy has a role to play, just as powerful are measures that can be taken up by parents, schools and local authorities, who need not wait for central government to catch up.

Terms and conditions of parental covenants ought to be specific to different age ranges. Primary schools, for example, could concentrate on the importance of children not needing a smartphone at all, whilst secondary schools could urge parents to invest in dumb phones until children reach 16, emphasising concerns around porn, sexting and cyberbullying. The impacts of screentime on sleep, concentration and attainment at school should be a particular concern.

Cultural and language barriers, as well as parental resentment of intervention into family life, may be challenges to this approach – though not insurmountable ones. First of all, framing school digital policy in terms of a contract or covenant, and going through a consultation process, empowers parents as agents in building an ‘offline’ school culture. Many minority communities are more suspicious of authority or harder to reach with policy,¹⁸³ yet they also tend to have strong religious and family values. Among these groups, working with religious and community leaders, and emphasising the aspirational and educational benefits of restriction, could be a productive approach.

An analogue education

As explored in Chapter 3, there was a standing contradiction in the Starmer government’s strategy on screens in schools. Despite recognising the potential of smartphones to distract from and damage education, it still sought to ‘digitise’ much of education and move more learning onto screens.

As discussed, this introduces several problems, including the capacity for children to be distracted or access inappropriate content through school devices; the habit-forming qualities inherent to screen use; and the loss of the skills gained through tactile, embodied education. Skills like reading and writing suffer, especially in the early years, from the loss of tactile elements, even setting aside the powerful distractions inherent to internet-enabled devices – with studies showing that the greater physical engagement and tactile feedback involved in handwriting engages more of the brain than typewriting.¹⁸⁴

In place of the approach pursued under Starmer and other previous governments – which is self-contradictory, unsure of itself and liable to be swayed by lobbying from the tech industry – the government should promote an education that is ‘analogue by default’. This does not mean rejecting digital tools where they are genuinely helpful, but it does mean that any new tool, from AI tutoring to edtech platforms, should be carefully scrutinised. If a task or lesson at school can be efficiently completed without technology, it should be. The less technology there is in a classroom, the fewer the distractions, and thus the greater potential for pupils to explore education in a tactile, embodied way. Many educational models, from Forest schools to Montessori schools, already adopt more creative, embodied and outdoors forms of education; the best practices from these areas should be more widely adopted in comprehensive education.

In a digital age, it is of course necessary for children to receive some instruction in technology. However, time should be spent on teaching *mastery over* computers, software and technology – not seeking to automate or digitise traditional subjects which do not require screens or software to be taught. Too much so-called ‘edtech’ inculcates the same passivity as consumer-focused technology, and may well have been designed to do so, acting as an ‘on-ramp’ to becoming a customer of big tech.

Similarly, schools should not become a testing ground for AI, which carries many of the same and even more concerning harms and dangers as screens. Thus far the main impact of AI on education has been to severely complicate the setting of homework and coursework, as large language models write unique essays at the press of a button. This fact alone is reason enough to recommend the implementation of more handwritten homework and assignments, along with the proven benefits of handwriting to memory and retaining lessons, as well as improving hand-eye coordination.

Many schools have a strong and conscious ‘ethos’, a philosophy of education that informs everything they do and how they do it. This can be a religious worldview, an educational theory or a philosophy of life, but such strong governing visions have a salutary effect. They allow schools to be more attentive to training habit and character as well as skills, and to look at everything that happens in school in holistic terms rather than in isolation.

One of the most important elements of such education is the way it gives pupils greater confidence and psychological resilience,

helping both to prepare children for the online world and to address the mental health crisis amongst the young. While this should involve more therapeutic and pastoral support in schools (see the following subsection), psychological resilience should not be seen as a matter for specialist intervention alone. There is great evidence, for example, that more creative and embodied education can help lonely and unconfident children, preventing emotional problems and difficulties earlier on.¹⁸⁵

As such, as well as drawing up a formal policy on social media and smartphones, every school should also define its ethos with reference to character, citizenship and habit education. Schools should set down the virtues and habits that teachers and pupils alike will strive towards embodying. This ‘ethical constitution’ should inform its digital policy, the idea being that placing limits on technology should be understood as part of a wider character-based education, not just a question of limiting harms or disciplining pupils who use distracting technology.

Such an approach should not limit the pluralism of approaches in schools, which is beneficial both as a kind of ‘laboratory of ideas’ in which best practices can be developed, reflects a healthy democratic culture in which parents, teachers and pupils have a say in education, and offers choice to parents in deciding what educational philosophy best suits their children.

Not all schools, however, are doing equally well, either in tackling the challenge of digital technology, nor in putting character and habit at the centre of the curriculum. Lessons should be learnt from schools that are leading the way in this area, and best practices adopted across the educational system, with support from the Department for Education. The classical education movement has combined a ‘great books’ curriculum with character education to create a compelling and coherent model, that bridges the siloing of subject areas and helps children put texts and ideas in a wider context, relating it to their lives and wider society.

If these schools are sometimes seen as simply ‘traditionalist’, the reality is more complex. In fact, they have much in common with other forms of holistic, child-centred and creative schools, like Montessori and Waldorf schools, with their emphasis on handicraft, independent learning and working outside, and commitment to social justice and individual dignity. In both instances, exam results

and skills are understood as downstream of character and habit, and learning is not restricted to classrooms.

Different schools can learn from these approaches and adapt it to their own specialisms and philosophy. A Muslim or Jewish school might put more emphasis on the great works of the Islamic Golden Age or the Haskalah; a science-focused school might integrate art and outdoor learning; or a school committed to the performing arts might use theatre to explore character and moral dilemma.

Pastoral care

As well as acting preventatively to restrict screens and social media from schools, more attention needs to be taken to engage with the damage already done, and the wider mental health crisis amongst young people.

The scope of this crisis is well covered elsewhere, but its depth and extent can be measured in reports of declining numbers of friends and romantic partners; higher reported and diagnosed rates of mental illness; growing numbers of young people dropping out of the workforce, and an increase in the use of anti-depressants. Specific mental health problems and pastoral concerns linked to screens and social media include porn, social media and gaming addictions, cyberbullying, body image issues, eating disorders, gender dysmorphia, sexual harassment, revenge porn, grooming, sleep problems and a variety of trauma responses.¹⁸⁶

Schools need specialist support in these areas, as well as a pastoral response. Though there are already counsellors and chaplains doing excellent work in this area, support for mental health professionals is far from consistent, with less than half of state-funded schools reporting that they have no on-site mental health support, such as a counsellor.¹⁸⁷ Moreover, existing professionals in this area report being overwhelmed and unable to provide the support needed to children.

Employing a trained therapist in every school, with special concern placed on helping children navigate the risks and opportunities of new technology, would help to resolve the current deficit of care. Pastoral and therapeutic support should work together not only to help individuals struggling with mental health problems, but also to create a school culture that supports psychological resilience and

character education, working to limit screentime and social media use as an essential (though not the only) part of this.

More specialised help and therapy should also be sourced by schools and local authorities to address the damage caused by technology, particularly as it manifests in issues with speech, writing and ADHD – especially in early years education, when these problems begin to set in.

Media Literacy

As discussed in Chapter 3, there are problems and limitations to the existing PSHE education and relationships and sex education (RSE) when it comes to addressing the issues of online dangers and harms.

Whilst the goal of ‘media literacy’ is admirable it risks continuing the essentially passive, consumeristic approach to technology inculcated by existing platforms. Children are encouraged merely to be ‘literate’ consumers of content; far too little attention is given to the question of avoiding and regulating such consumption itself, and in finding more creative and disciplined applications of digital technology.

More attention needs to be given to the potentially addictive nature of screens and internet use, and particularly to the time-monopolising qualities of gaming, social media, short-form video content, porn and screens themselves. Age-specific public health guidelines around screen use and social media should be shared with children in school through the PSHE and RSE curriculum, as well as forming part of school policy.

Far more attention needs to be given to the overall nature of the technology and platforms themselves, rather than focusing merely on ‘misinformation’ in individual pieces of content. An updated digital literacy curriculum would explain how algorithms work; how private data can be harvested and hacked; how and why technology is designed to be addictive; and how it impacts sleep and concentration. It would offer simple, practical advice on healthy use, recommending technological resources like dumb phones and screentime-limiting apps.

At present, the curriculum is highly politicised, especially when it comes to issues of sexuality, gender and even pornography. In RSE

in particular, so-called media and porn ‘literacy’ – in which feminism, body image and ‘realistic’ ideas about sex predominate – is in danger of giving a partial account of the potential harms of porn and online spaces. It tends to overlook the danger of porn as a deceptive portal to sexuality that diverts users away from rejection, discomfort and the complexity of human relationships. Resources like ‘ethical’ and ‘safe’ porn sites focused on ‘female pleasure’ and ‘queer people’ – which were a feature of the most recent independent report – fail to see that all porn is unrealistic, addictive and potentially harmful by its very nature.¹⁸⁸

A gendered approach

The experience of online spaces and digital technology is, as explored earlier in this report, highly gendered. While boys tend to be more heavily engaged by gaming and porn, girls are more influenced by social media. Women, as we know, report higher rates of mental illness, whilst men are more likely to commit suicide. These differences may be biologically derived, socially conditioned or, more likely, involve the complex interaction of nature and nurture. As such, gender differences must be taken account of by educators and policymakers if they are to most effectively help boys and girls navigate the digital world.

At present, feminist attitudes inform much of the contemporary curriculum, with much attention (rightly) being paid to questions of sexual bullying, sexting, harassment and gendered violence against women and girls. However, placing emphasis on these concerns can sometimes come at the expense of boys, who experience their own unique problems and harms in relation to online spaces and are, on average, falling behind girls in terms of academic achievement at school and at university.

In the area of sexual bullying and harassment, a focus on sexist attitudes may miss or politicise the deeper issue of men and boys unable to discipline their own urges and exist in a relational, accountable way with other people. The numbing effect of technology, including gaming, videos and porn, teaches boys to satisfy rather than control appetites and desires, and to become socially isolated and passive. PSHE and RSE should encourage a relational model in which children learn to negotiate their identity and desires socially, rather than exploring them solipsistically in virtual settings.

In general, education should take account of gendered differences and vulnerabilities in relation to harmful digital influences. The greater susceptibility of girls to social media, peer pressure and social contagion should see an emphasis on confidence and psychological security. In the same way, the greater dangers of boys becoming sedentary and isolated through gaming and entertainment should be cause for a focus on physical activity, socialisation and discipline.

Of course every child is different, and the aim of the curriculum should not be to reinforce stereotypes. Instead, schools should seek to positively bridge gender gaps in psychology and behaviour, teaching boys to be more empathetic and sociable, and girls to be more confident and comfortable with conflict. The principle of ‘offline’, analogue education helps decentre gender and pull children away from divisive online debates, re-emphasising the importance of real-life relationships in the particular context of the school.

Free-range childhoods

If the problem of growing up online is as much about missing out as it is experiencing harms, more consideration needs to be given to the other barriers and lack of opportunities for embodied social life, along with hobbies and activities for children. Much has been made of Jonathan Haidt’s identification of digital technology as the root of the mental health crisis, but less attention has been paid to the other culprit: the loss of a traditional, ‘free-range’ childhood.

There was an article in the *Daily Mail* in 2007 featuring a striking map that showed the shrinking circles of mobility experienced across the generations.¹⁸⁹ It pictured the effective ‘range’ of freedom enjoyed by the children of a single family in Sheffield across four generations. At the age of 8, George Thomas was allowed to walk 6 miles away to his favourite fishing spot. At the same age, his son-in-law Jack Hattersley was permitted to walk a mile away to the local wood. His daughter, Vicky Grant, growing up in the 1970s, could walk to school, and half a mile to the swimming pool, on her own. But by the 2000s, at the age of 8, her son Edward spent most of his time outside in their small garden, and couldn’t go beyond the end of his street. His parents would like him to have the freedom they had, but traffic is busier, and other kids don’t venture out either. Since that

article, things have gotten still worse, with a recent report finding that outdoor play had halved in the course of a generation.¹⁹⁰

Understandable concerns about child safety have ironically created new harms as obesity, sedentary lifestyles and psychological fragility become ever more common in children.^{191,192} Where once children formed their identity by going outside, they now go online. Instead of neighbours and local friends, children are potentially exposed to a near-infinity of influences across the globe – many of which seek to exploit or profit from them.

Social atomisation is a society-wide problem, with a breakdown in institutional loyalty and belonging that affects churches, trade unions, political parties and social clubs. Equally, long before the internet, the television was disrupting family life and rendering individuals more passive and sedentary. Just as powerful a factor in changing the shape of local communities, especially for children, is the domination of cars, with big and busy roads dividing communities, emptying streets of pedestrians and scattering populations more widely.

In the short term, additional resources for sports, local clubs, and children's activities out of school and after school could help bring more alternatives to going online. This could take the form of more funds and requirements for sports and PE at school, as well as grants for local community groups and charities to provide more outdoor socialisation and sports for children.

Ongoing efforts to pedestrianise and create low-traffic neighbourhoods show an existing political and social appetite for safer, more child-friendly neighbourhoods. More public transport not only takes cars off the road, making them safer for children, it also makes children and teenagers more mobile and independent.

Civil society has a vital role in creating safe communities where 'free-range childhoods' can occur. Strengthening existing community groups like Neighbourhood Watch, and local government like parish councils, can help to do this by creating child-friendly spaces locally. Simple aims, like more children walking to school, could be facilitated by steps as simple as introducing more 'lollipop ladies' to supervise road safety around schools. Government could also provide additional support and funding for DBS checks for volunteers to help facilitate the creation of safe, child-friendly neighbourhoods.

Technology can play a positive role here, with GPS-enabled ‘dumb phones’ allowing parents to communicate with and track their children without exposing them to social media, creating wider zones of freedom and safety. This has to be carefully balanced with children’s privacy and freedom, especially as they get older. Technological tools should also not become a substitute for social trust, or reinforce the role of screens in parents’ and children’s lives.

Building design and urban planning have a vital role to play. Design features, such as internal courtyards for apartment blocks provide natural safe spaces for even very young children, and encourage socialisation with neighbours. This is especially important for urban settings, where concerns about stranger danger, crime, traffic and anti-social behaviour are all understandably greater. Increasing foot patrols, community and neighbourhood policing is an important element in this context, with visible police both creating a sense of safety and giving children a visible, trustworthy figure of authority they can appeal to if lost or in trouble.

Regulating technology

The above recommendations concern what policymakers and wider society can do to regulate how, and how often, children use screens. But there are also changes to be made at the source: knowing the motives and profit incentives of big tech companies, is there more we could be doing to set boundaries when it comes to children and technology? There are many existing efforts in this area, with the British government passing the OSA in 2023 and a recently concluded consultation over new legislation to restrict and regulate social media.¹⁹³

Not only are there legitimate reasons to be concerned by such efforts – for one, the OSA has brought in age checks for adults which require the sharing of even more personal data – but there are also limits to what we can practically do. The tech industry is overwhelmingly concentrated in America, which in turn is heavily invested in our domestic sector through companies such as Google’s DeepMind. Britain can do much less than America when it comes to reshaping this industry from its foundations. However, this could one day change, especially if we continue to develop our domestic technology industry.

Social media bans and the Online Safety Act

One of the most widely reported matters is a planned ‘social media ban’ restricting children under 16 from accessing social media, which would follow the approach recently taken by Australia. Given the widespread harms of social media use outlined in Chapter 1, this looks superficially appealing; but there are many problems and limitations with this that must be addressed.

In the first instance, as noted by the National Society for the Prevention of Cruelty to Children (NSPCC) and other organisations, this is a ‘blunt’ instrument that may distract from deeper issues, and create a ‘false sense of safety’. The organisations also pointed out existing restrictions on under-13s accessing social media are already not seriously or effectively enforced, so there seems little point in extending a restriction that can already be readily circumvented.¹⁹⁴

This problem of enforcement is the largest obstacle to regulation. Large platforms will comply with UK law, but they will only do so in the UK. This means that any age-verification mechanism will only apply to British IP addresses. It takes only a few minutes to download a VPN and login from a jurisdiction with no such restrictions. Nor does an online age-verification method exist that is itself fully secure. Because the user controls the data that is supplied to the platform, it is a matter of great ease for a child to find an adult’s passport, driving licence, credit card or photo to gain access.

If we look at an existing age verification law – the OSA – which mandates, amongst other things, age verification for porn sites, we quickly realise how trivial the effectiveness of such laws is in practice. As well as being circumventable with a VPN, it is impossible for the UK government to ensure every website is compliant, especially when hosted in jurisdictions that are not compliant with UK law in general, as we see with the included problems of Russia-based cyber criminals. It is possible to gain access to explicit content even without a VPN.

On the question of VPNs, which are another matter that will be in the consultation, it is also unclear how they can be regulated. The same problems that apply to age-verifying content extends to VPNs themselves and, if anything, still more so. Banning VPNs, aside from mimicking the actions of authoritarian states, would be difficult and likely fail to recognise that they have a legitimate purpose, including for children. VPNs hide users’ IP addresses and prevent websites

tracking users, securing their privacy; many internet security packages include VPNs by default. Given the legitimate concerns we have around children's privacy, it is not clear that we should want children to stop using VPNs.

Nor is it clear what counts as a social media platform. We can all agree X and Facebook are social media – but what about online gaming platforms such as Roblox or World of Warcraft? Or even YouTube? This blurring of the boundary between social media and other digital activities makes regulation very difficult in practice, forcing regulators to choose between draconian and ineffectual approaches. The proposed social media ban is closely modelled on Australia's, which has omitted gaming from the ban, along with messaging services like WhatsApp and Signal.¹⁹⁵

Moreover, while this report has consistently emphasised the dangers and harms of social media for children, it recognises that benefits exist. Social media can be used positively to share ideas, aid learning, develop creative skills and create friendships. Earlier use of social media has a legitimate role, if it can be supervised and done via non-addictive mediums. The government's approach continues to focus too much on external 'harms' rather than seeing that there are harms currently inherent to the technology, and that quantitative and cumulative use of technology can lead to a qualitative shift in which it eventually *becomes* harmful, as with other activities that become harmful and addictive through excess.

Thus, this report recommends amending proposed plans for an under-16 social media ban, by banning social media for under-15s, in line with the 'internet age of majority', whilst allowing 15- to 16-year-olds to have social media accounts with parental approval and monitoring. Older teenagers can have social media accounts, but their parents must set them up and control access to them, with adult content filtered by default. As with Greece, this can be implemented via a government app which manages the age-verification element.

By using an app and bringing in parents to help with enforcement, this resolves many of the technical problems with age-based bans and positively engages the family. Nor would the app need to be deleted at age 15, with parents encouraged to exercise their discretion in extending its use to older teenagers. Teenagers could still use social media positively, and learn to engage in a healthy,

proportionate way with the technology via the transnational stage of a monitored and regulated period of use.

Non-addictive technology

The most welcome outcome of the government's consultation, which suggests that there is at least partial awareness of technology's harms, is the recognition and targeting of the 'addictive design' of social media apps.

This recognition is an important watershed, but it does not yet go far enough. It remains focused on 'algorithms' and social media, with no mention yet being made of the potentially addictive qualities of hardware itself. Importantly, the issue of addiction cannot be treated in isolation or restricted to a small pool of pathological users, but must be seen in holistic and social terms, looking to the problems of distraction and time displacement. Rather than focusing on age verification and hard to enforce safety measures, regulators should instead directly target the harmful elements of the technology itself, protecting not only children but adult users as well.

The majority of time spent 'online' is actually monopolised by a few giants: chiefly Google, Facebook, Instagram, YouTube and TikTok. If these companies wish to do business in Britain, they have to follow our laws; thus law can effectively force them to make their products less harmful and behaviourally addictive. Removing features like autorefresh, infinite scroll and other addictive-like algorithmic tricks would go some way to mitigating the harms of social media, and are achievable with legislation.

The notifications system on smartphones and other devices also create a continually distracting impact that should be taken as seriously as (and understood as interacting with) the addictive element. This 'nuisance' element can seem trivial, but taken cumulatively creates huge harms. More static, user-controlled, bounded and unmanipulated social media would involve a fundamental rethink and redesign of how apps work that goes beyond what the law can mandate.

Thus, as well as moving ahead with legislation to address the addictive elements of existing platforms and technology, we should develop a series of good principles and best practices for software and hardware design so that they actively mitigate against and discourage addictive and distracting elements. Public and private

investment should be put into developing software and hardware that fits these principles.

Ofcom should be given new staff, resources and powers to regulate in this area, overseeing a 'traffic light' system whereby technology is rated depending on its lack of addictive and distracting qualities. This rating system should be as visible as possible, and should have to exist prominently, like the warnings on tobacco packets, in any physical or online advertising or packaging.

Just as Britain is seeking to produce innovation through sustainable and 'green' technology, we could become a centre of 'calm' and non-addictive digital technology. As the EU tightens its digital regulation, especially around US-based tech firms, there is an opportunity for Britain to become a leader in ethical redesigns of devices and their functions.

Conclusion

Where does that leave us? This report isn't about digital technology or the internet in general. It's about a generation that is growing up online, and what that is doing to them and us. The centrality of childhood in this debate is appropriate and useful. Children are most endangered by the harms of this technology, being the most crucial demographic for advertisement and technological take-up; but they are also the group which can most easily be protected by law, policy and institutions.

And what is the purpose of protection? Preparedness for contact with the online world, whether through work, social media or adult content, is the focus of a great deal of educational energy right now. Yet exposure to the digital world is not the same thing as preparing children for it. Outside of lessons specifically teaching digital skills, the use and intrusion of screens, connectivity and software into once tactile, embodied lessons represents a degradation of education. Limiting screens to practical, creative and focused work for set periods of time in the school day helps set a pattern that can extend into home life.

What's so bad about screens? They monopolise our attention and, combined with connectivity, are supremely distracting devices which decrease our ability to concentrate and awareness of our environment. These technologies are not only harmful for children in exposing them to inappropriate content and other externalities – it is harmful in what it displaces. Hobbies that once involved travel, real-world socialisation and embodied work are now virtual, isolating and sedentary. The powerful appeal of gaming, porn and social media lures users into distraction, addiction and isolation. We've all had the experience of looking up from a computer and being amazed at how long we've spent on it. Time spent on a screen crowds out sport, exercise, reading, family time, friendship, romance, and a host of other normal and natural parts of growing up.

What is the alternative? If the problem is growing up *online* – children becoming addicted to screens, scrutinised by social media, and exposed to adult content – then the answer is that children need to grow up *offline*. That means screens and the internet being introduced in developmentally appropriate ways, with strong legal,

social and institutional guards to prevent children being plunged into a world of continual connectivity and distraction.

By having childhoods full of physical and embodied activities and real-world relationships, children will not be worse but better prepared for adulthood in a digital age. Studies already show that children with later and lower exposure to screens and social media have better physical and mental health and develop a wider and more adaptive range of skills.¹⁹⁶

The overall goal is for a variety of stakeholders to co-operate to limit screens in children's lives, and ensure that introduction to technology is phased, monitored and positive. Importantly, children would be habituated to a life lived primarily offline, in which screens are used in limited, controlled and creative ways, letting them make the most of digital opportunities whilst being less exposed to its harms in later life.

In creating an offline childhood, the point is not to produce a temporary shelter, but to create engaged, active citizens able to shape and master technology, rather than becoming passive consumers and products. Schools, parents and children themselves can take a direct part in this effort by modelling new ways of living, using and working with – and without – digital technology. This report recommends a holistic approach, in which parents, civil society, schools, local communities and government, national policymakers and the private sector all work together towards the common goal of bringing children up offline.

The need for such a holistic approach, apart from the general advantages of the method, arises from the nature of the technology and of childhood itself. Children are susceptible to influence and are intelligent, defiant and curious. They must be engaged and persuaded just as much as any other part of society and will quickly pick up on any inconsistency between home and school. The technology of connectivity is so powerful and widespread that it too will find any inconsistency or gap in policy. The problem has to be attacked both at source, by seeking to attack the addictive nature of social media, and at the endpoint, by keeping screens physically out of the hands of children. Long term, domestic and bilateral digital investment and innovation could offer more 'prosocial' digital technologies and tools.

As we've discussed, narrowly focused interventions have their challenges, illustrated by the challenges parent groups face in agreeing to restrict phones when school policy undermines their efforts. But this does not mean that local or small-scale initiatives are inherently ineffective. Parental groups could focus their efforts on lobbying schools, while homeschooling may offer an alternative for families unhappy with the dominance of technology in youth culture, particularly if the government does more to support and formalise such arrangements. There is no single solution: schools, communities and families should be free to develop approaches suited to their circumstances, with successful local initiatives providing models for wider adoption.

In this effort we must not only be unified, but visionary. Our aim should be to create a society that is resilient and adaptive in the face of technological change, in which humans, not markets or machines, dictate the shape and future of society. Above all, we must recover the traditional, offline childhood as the precious inheritance of present and future generations.

Notes

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Conclusion

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Our children are *growing up online*. Almost every child in Britain is using the internet by the age of nine and over half own a smartphone by eleven, some spending up to six hours a day scrolling social media. The UK Government's proposed social media ban for under-16s comes in response to mounting evidence that digital childhoods are harming young people and their mental health, with online exposure to pornography, violence, misogyny, self-harm and eating disorder content widely identified as the main causes for concern.

These must be taken seriously – but just as worrying are the more subtle ways in which technology is reshaping young minds, and the real-world experiences they are missing out on as a result. As technology intrudes on almost every aspect of life, at home and in school, in-person activities are being increasingly sidelined. Children today spend less time than ever exploring their physical environments, forming real-life relationships and discovering offline hobbies. Their attention and ability to concentrate are also being markedly diminished, the full consequences of which we may not see for years to come.

In *Growing Up Online*, Sebastian Milbank investigates how these harms are already affecting different age groups and demographics in Britain today: though many middle-class parents are taking action to curb technology at home, children from lower-income families display alarming rates of screen use, with schools reporting sleep deprivation, poor concentration and bad behaviour as a result. Current approaches focused solely on harmful content, he argues, fail to address the behavioural, mental and emotional damage caused by screen addiction and attention displacement, even in seemingly innocuous forms such as 'Edtech'.

Milbank thus advocates a shift away from policies focused solely on limiting children's exposure to harmful content towards a more comprehensive public health, educational and civil society approach. He argues that, while we must work to make digital technologies less intrusive and behaviourally addictive, this must also be accompanied by a positive strategy for rebuilding offline childhoods and introducing young people to technology in a way that promotes agency rather than passive submission.

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