



Ordinary magic for the digital age: understanding children's digital resilience

By Rachel Rosen for Parent Zone
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Introduction

As early adopters of technology, children and young people not only inhabit digital spaces, they drive technological developments and shape online services.

The trouble is, that the digital world is complicated. It is risky and challenging and has little respect for age. The technology that allows a child to watch elephants in their native habitat streamed live as part of a geography project is the same technology that delivers pornography to tablets and computers. The social network that allows classmates to help each other with their homework is the same network that facilitates bullying and trolling.

We're working hard to find ways to make sure children stay safe online but the truth is there isn't a single fix.

Of course, services need to do everything they can to ensure children are safer. Tools like privacy settings and SafeSearch are essential, and we need tech companies to continue to innovate to make them better. But we also need children to be digitally resilient.

Children need to be able to recognise problems, such as bullying or grooming, and feel confident about confiding in their parents or other trusted adults. They need to be able to take age-appropriate risks online so they can learn how to navigate the digital world, with all of its challenges.

Attempting to keep them from it 'until they are old enough' or hoping at some point there will be a legal or technical fix to all of the problems of the internet is naïve. It's no more realistic than imagining we can make the offline world safe for all children at all times. What's vital is that we do everything we can to raise children's levels of digital resilience but to do that we need to understand what we mean by it and make sure that our collective efforts are contributing to it.

We at Parent Zone started the conversation about online resilience. Back in 2014 we worked with Virgin Media and the Oxford Internet Institute to commission the first study into the subject, [A Shared Responsibility: Building Children's Online Resilience](#).

Since then, others have taken up the challenge to look into this important area.

Five years on, Parent Zone has commissioned Rachel Rosen to examine the wealth of material that now exists on digital resilience, sift the wheat from the chaff and look forward to how parents and professionals who work with families can help promote it among our children.

Let's all work together to make 2017 the year of digital resilience.

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The landmark 2008 report *Safer Children in a Digital World* (the Byron Review) set out three key objectives for online child safety in the UK. The Byron Review led to the creation of the UK Council for Child Internet Safety and it has shaped the conversation about safeguarding children in a digital age ever since. The first two objectives – reducing the availability of harmful material and restricting children's access through a combination of technical tools and parenting – have thus far dominated the agenda.

Internet service providers have rolled out free parental controls to all customers, age verification tools have become more advanced and, where risky content was also illegal, government and industry have worked together to have it removed. All of these initiatives have helped to make the UK a world leader in child internet safety. Still, the third objective has been comparatively neglected.

That third strategic objective is as follows:

'Increase children's resilience to the material to which they may be exposed so that they have the confidence and skills to navigate these new media waters more safely.'^[1]

In 2014, Parent Zone collaborated with Virgin Media and the Oxford Internet Institute on research investigating children's online resilience, informed by the third objective from the Byron Review. The research reinforced the importance of digital resilience, the neglected third objective, to safeguarding children in a digital world.

In 2001 Dr Ann Masten, a leading resilience researcher, had published a paper called *Ordinary Magic: Resilience Processes in Development*. In it she argued that the surprisingly common and ordinary nature of resilience **'offers a more positive outlook'** on human development.^[2] This paper will investigate why resilience matters online, what exactly we mean by digital resilience and how we should promote it – in short, the nature of ordinary magic for the digital age.

Why resilience?

Often discussions about resilience centre on cultivating the ability to bounce back from trauma or harm. This can be jarring when children, especially young children, are involved. Instinctively, adults who care about children would rather protect them from risk and prevent them having bad experiences altogether. The trouble is that we cannot guarantee a safe internet.

In 2016, freedom of information requests to UK police forces revealed that the internet is used to commit an average of eight sexual crimes against children per day - more than 3000 crimes per year.^[3] By 15, a majority of UK children have seen online pornography.^[4] And in 2016, Parent Zone's own survey of young people aged 13 to 20 found that more than half of respondents had seen people talking about hurting themselves, hurting someone else and/or suicide online.^[5] Most of the young people exposed to this content were worried or upset by what they saw.

Filters and parental controls offer a partial solution to these issues, and few would argue against keeping graphic or disturbing content away from very young children as they start to explore the online world. But technological and social realities mean filtering can only serve as one, limited part of a strategy to safeguard children.

1. Byron, T. (2008).

2. Masten, A. (2001).

3. NSPCC. (2016).

4. Martellozzo, E et al. (2016).

5. Rosen, R. (2016).

70% of children aged five to 15 have access to a tablet, while 40% of five to 15s and 80% of 12 to 15s have a mobile phone.^[6] It's becoming more likely that a child's internet use will happen via one of these portable devices, which means that each child - however diligent their parents have been about filtering and monitoring on home broadband - is only as safe as their least-protected friend. Filtering, monitoring and parental controls might protect a child on their own device, in the safety of their own home, but there's no guarantee that their experiences with the internet at a friend's or in the playground will be equally protected.

Even the best-case scenario for filters and parental controls - keeping your child away from all objectionable content - doesn't eliminate all risk.

	Commercial	Aggressive	Sexual	Values
Content (child as recipient)	Adverts Spam Sponsorship Personal info	Violent/hateful content	Pornographic or unwelcome sexual content	Bias Racist Misleading info or advice
Contact (child as participant)	Tracking Harvesting personal info	Being bullied, harassed or stalked	Meeting strangers Being groomed	Self-harm Unwelcome persuasions
Conduct (child as actor)	Illegal downloading Hacking Gambling Financial scams Terrorism	Bullying or harassing another	Creating and uploading inappropriate material	Providing misleading info/ advice

EU Kids Online

In *Safer Children in a Digital World*, Professor Tanya Byron categorised the types of risk faced by children online according to the system laid out in this table. Studying this classification system helps reinforce why filters, controls and restriction are not complete solutions to online risk.

They are effective against many types of content risk, like hateful and pornographic content, but much less so against many contact and conduct risks, like meeting strangers online or bullying. While this isn't a hard and fast division - filters would be ineffective at blocking misleading advice, a content risk, but could likely be used to block most types of online gambling, a conduct risk - it reminds us that technical tools will never be a complete solution to the social issues created by technology.

While careful use of filters can stop a child watching pornography, it can't necessarily stop them talking to and being groomed by someone who wants to hurt them. It can prevent violent images from showing up in a child's web searches, but would it stop them from making contact with someone who wants to incite them to violent acts?

Of course, the majority of children are highly unlikely to encounter many of these risks online. Most children use the internet without meeting anyone who wants to abuse or radicalise them.

For the majority of children, it's the less extreme but more pervasive risks, like bullying or harassment, that could be a cause for concern.

In March 2016, research by Demos, tracking key words, revealed that UK Twitter users sent more than 10,000 aggressive and misogynistic tweets in three weeks. Over the same time period, more than 200,000 similar tweets were sent worldwide.^[7]

6. Ofcom. (2014).

7. Bartlett, J et al. (2014).

This research confirmed what lots of internet users – especially women and people of colour – have been saying for years. Social media provides a gathering place for people with strong and diverse opinions, many of whom believe passionately in their right to express those opinions at any cost. Sometimes, this leads to abuse.

That was also made clear in the summer of 2016 as *Ghostbusters* star Leslie Jones was driven off Twitter by racist and sexist trolling. She later rejoined the platform after getting a personal response from CEO Jack Dorsey – but as many users correctly pointed out, ordinary people (including children) who are targeted online don't often receive that level of attention or protection.

There is a healthy debate to be had, with no simple answer, about the line between preserving free speech online and protecting innocent people from threats and harassment. Some argue that people who spend a lot of time online, particularly public figures, should grow a thicker skin and learn to ignore their critics. But even forceful advocates of free speech would surely admit that young children might find hate and abuse harder to deal with than adult celebrities and politicians. When a celebrity is trolled or abused on Twitter, they are not the only one who sees the messages. Their fans, including young people, are often exposed to the same content.

Grooming, radicalisation, harassment and bullying are almost universally condemned, but it isn't just abuse that leads to risk. Much more commonplace and fundamental characteristics of the online world can also threaten children's wellbeing.

Reliable statistics on how many online advertisements we are exposed to each day are hard to find. A [study](#) by market research firm Yankelovich estimates that we see up to 5,000 advertisements per day, but this figure is often questioned and doesn't refer specifically to online advertising. Anecdotally, my AdBlocker claims to have blocked over 72,000 ads in four months.

Because so many online services and content providers are 'free,' advertising has emerged as a way of funding the internet, which explains its ubiquity. But as is so often the case with new technology, mass marketing may have come into place before we fully understood its effects.

In June 2016, two separate European studies explored the effects of online marketing on children and young people. The two studies, one from the LSE and the University of Catalonia, and the other from eNACSO, conclude that online advertising does have an effect on children.^[8] In light of their specific vulnerability and role as economic actors, the studies say, stronger protections should be introduced and greater care should be taken.

If the very system that finances the internet is potentially harmful to children, it's hard to argue that we can keep them safe by shielding them from all online risk.

We can't turn back the floodgates and return to a time before the internet. When computing is a part of the national curriculum and many jobs of the future involve some contact with, if not mastery of, technology, we can't stop children using it or stop it being part of their lives.

Equally, we cannot – and perhaps should not – guarantee that it will be a safe or welcoming place for them. From those who wish deliberate harm to the inherent externalities of the digital economy, participating in online life comes with risk, as it does in the offline world.

We now know that making our children resilient enough to cope with the challenges of a digital world is the best chance we have of keeping them safe. Since the publication of *A Shared Responsibility*, the child protection and online safety industry has begun to shift its focus towards fostering resilience – a welcome change.

But without a clear definition of what digital resilience looks like and how we can help children achieve it, we risk setting off down an ineffective or harmful path under the assumption that our actions are

8. Nairn, A et al. (2016). and Lupiáñez-Villanueva, F et al. (2016).

evidence-based, telling children to toughen up and bounce back without critically examining what that means, or how we can help them do it.

These concerns were recently articulated by Natasha Devon, the Department for Education's former mental health champion. In her column for TES, she criticised **'rhetoric which...talks of "character" and "grit" as solutions to young people's inability to deal with the realities of modern life!** Worryingly, she also quoted an education professional as saying that **"no one knows"** what resilience really means.^[9]

To safeguard children, we need to work towards a clearly defined vision of digital resilience that empowers them to **'deal with the realities of modern life'** – and one that puts the responsibility on adults and society to help them.

What is digital resilience?

Academics have been studying what it means for people, and children in particular, to be resilient for decades. By reviewing key themes from the literature, we can construct a definition of digital resilience that draws on and critiques established understandings of children's resilience.

Bouncing back

The dictionary definition of resilience is **'the capacity to recover quickly from difficulties; toughness!'** And many child welfare experts also define resilience along these lines.

In a 2014 report on building resilience in schools, for example, Public Health England defined it as **'the capacity to "bounce back" from adversity.'**^[10] Harvard University's Center on the Developing Child uses resilience to mean **'the ability to overcome serious hardship.'**^[11] Presenting to the ICT coalition, respected psychiatrist and child mental health expert Dr Richard Graham defined digital resilience specifically as **'the ability to manage online stress and adversity.'**^[12]

There are no shortage of experts and academics defining resilience along these lines, and this is by no means an exhaustive list. This is the view of resilience that prioritises a child's ability to experience something dangerous or harmful and come through it relatively unscathed.

It teaches us that resilience is not something you can foster by eliminating risk – to become truly resilient, you must be allowed to practise managing and evaluating risky scenarios. In a 2002 review of strategies for children's care services, for instance, Tony Newman wrote **'the promotion of resilience is not simply a matter of eliminating risk factors, as the successful management of risk is a resilience promoting factor in itself.'**^[13]

It's worth noting here that in our 2014 research, we found that parental restriction and use of filters was negatively correlated with resilience and positive outcomes. Without further study it is not possible to say why – but one possible explanation is that over-protection denies children the chance to successfully manage risk.^[14]

A lifelong process

Another key theme that comes out of the literature for some researchers is the idea of resilience as an ongoing process throughout a child's lifetime, rather than a fixed trait or quality. This idea gained prominence in the second wave of resilience research, as articulated by Wright et al in *Resilience Processes in Development: Four Waves of Research on Positive Adaptation in the Context of Adversity*.

9. Devon, N. (2016).

10. Allen, M. (2014).

11. Center on the Developing Child, Harvard University.

12. Graham, Richard. 2016.

13. Newman, T. (2002).

14. Przybylski, A et al. (2014).

In 2003 Luthar, et al wrote '**...the current emphasis is on understanding resilience as a process rather than a particular character trait!**' Also in 2003, Wyman wrote that '**resilience reflects a diverse set of processes that alter children's transactions with adverse life conditions to reduce negative effects and promote mastery of normative developmental tasks.**'^[15]

These explanations of resilience are valuable because they help us to move past imagining it as a fixed, innate quality, like '*character*' or '*grit*.' Defining resilience as a dynamic, diverse process throughout a child's life helps us understand that young people can be more or less resilient at different times; it prepares us to talk about why that might be and what we can do to encourage digital resilience throughout childhood.

The literature on what makes children vulnerable online tells us that there is no clear-cut, standard picture of a vulnerable child in the digital age. Instead, '**many factors combine to render some children vulnerable to online risk, under particular circumstances, and with diverse consequences!**' It should also be noted that '**though it is apparent that certain groups of children identified as vulnerable offline will be vulnerable online, this isn't always the case.**'^[16]

This makes it especially important for us to define resilience as a process, rather than a trait, in the context of the digital world. Examining the evidence tells us that no child is digitally resilient at all times – all children will move through stages of increased resilience and vulnerability at different points in their development.

Beyond trauma and hardship

Despite the risks that children face online, the internet remains one of the most wonderful resources humans have ever had. Too often we focus myopically on danger and risk, neglecting all the positives and opportunities the online world offers to children in the interest of keeping them safe.

In a recent policy brief, Alicia Blum-Ross and Sonia Livingstone of the LSE argued that online safety information for parents needs to move past seeing technology and the internet as inherently problematic for children.^[17] We agree.

Many resilience researchers study what helps children and young people survive in the context of extreme hardship, such as famine, war or prolonged abuse. The digital age does pose challenges for children and young people, and we know that developing resilience will help them cope. But definitions of resilience that focus exclusively on overcoming hardship or bouncing back after severe trauma are clearly ill-suited to the online world. Surely true digital resilience means thriving, in a new environment, not just surviving disaster – avoiding harm and recovering from setbacks, but also making the most of the opportunities afforded by technology.

Some resilience experts have embraced this view, even outside the context of the digital age. In 2001 Dr Ann Masten wrote '**goals now incorporate the promotion of competence as well as the prevention or amelioration of symptoms and problems.**'^[18]

The role of community

The first wave of resilience research focused primarily on the fortitude of individuals who survived and succeeded against the odds.^[19] In the second wave, researchers began to pay more attention to the importance of influences such as the family, school and community. The role of relationships and society gained its rightful recognition.

'All individuals need the support of the society in which they live,' wrote Masten et al.^[20] Dr Masten has also explained that '**much of resilience, especially in children, but also throughout the life span,**

15. O'Dougherty Wright, M et al. (2013).

16. Livingstone, S and Palmer, T. (2012).

17. Blum-Ross, A and Livingstone, S. (2016).

18. Masten, A. (2001).

19. O'Dougherty Wright, M et al. (2013).

20. Ibid.

is embedded in close relationships with other people.'^[21]

Our 2014 research found that supportive and enabling parenting was the most crucial factor in encouraging children to be resilient and regulate their internet use – clear evidence for the importance of a focus on community and support networks in digital resilience.

The role of parents and carers in protecting children and supporting their resilience is obvious. It is supported not just by the evidence but by even a basic understanding of the role of parents in their children's lives. Still, we should take care that emphasising the importance of parents is not seen as diminishing the role of others in a child's digital lives. Experts in children's resilience are also careful to note that it is a process that benefits immensely from a supportive society and protective relationships with significant figures, not just parents.

What does this mean in the context of digital resilience? One possibility is that it indicates a greater responsibility for tech companies and online service providers. If it is difficult for children to be resilient without a supportive society, it is hard to imagine that we can easily encourage them to be resilient online without the support of the online world.

Digital resilience: a process to harness resources to sustain wellbeing

Our definition of digital resilience must include the ability to cope with risk and harm, recognise that resilience is an ongoing process rather than a fixed trait, promote competence and positive outcomes and incorporate the role of community and support networks.

In 2014, several experts on child resilience published a paper based on the plenary panel from the 2013 meeting of the International Society for Traumatic Stress Studies. In this paper Dr Catherine Panter-Brick, a Yale medical anthropologist who has studied children's resilience throughout her career, put forward the following definition of resilience:

'...a process to harness resources to sustain wellbeing.'^[22]

Dr Panter-Brick's definition, informed by years of resilience research in diverse international contexts, seems uniquely well-suited to explaining how we should think about children and young people's digital resilience.

Defining resilience as a process means we can explore the many things that make children more or less vulnerable throughout and at different stages in their lives, including some of the non-traditional vulnerability factors that are especially relevant online.

Explaining that resilience happens by harnessing resources allows us to discuss the role of things like authoritative parenting, good online safety and PSHE education in schools, appropriate action by government and the responsibility of tech companies. It is also a step away from criticisms of resilience-building initiatives as victim-blaming, telling children they need to toughen up. By stating that a resilient child must harness resources, we can acknowledge that adults must provide them with those resources.

Finally, characterising the outcome of digital resilience as sustaining wellbeing moves the conversation beyond merely avoiding risk and recovering from harm. It allows us to say that, in addition to those two critical objectives, a digitally resilient child is one who is happy and successful in their use of technology. It is a child who has a good level of skill, literacy and confidence, and is prepared for life in the digital age.

21. Southwick, S et al. (2014).

22. Southwick, S et al. (2014).

How can we promote digital resilience?

There are three approaches to resilience-promoting interventions. The first focuses on reducing and preventing risks. The second approach is asset-focused, emphasising resources that facilitate children's resilience and positive outcomes. The final approach is process-focused, supporting children's natural adaptational systems.

Unsurprisingly, the evidence tells us that the most effective interventions incorporate all three approaches – and are aimed not just at children, but also at their families and communities. In a 2007 literature review, Action for Children wrote that **'multi-systemic interventions involving a mix of risk, asset and process-focused targets located at the child, family and community level hold the most promise.'**^[23]

To keep children safe and thriving in the digital age, we should intervene to promote resilience. Our strategy should tackle risk, provide resources and support positive adaptational processes. While more research is needed to determine the most effective examples of each approach, here we will outline examples of each that, in combination, could form part of an effective approach to promoting digital resilience.

Risk-focused interventions

This is perhaps the best-established type of intervention in the digital safety space. The drive to make filters and parental controls widely understood and universally available is a useful example of a risk-focused approach.

Use of technical tools to limit exposure to potentially harmful material, or to restrict access to inappropriate online spaces, allows children to explore the online world in a sort of 'walled garden.' This should, in theory, provide them with the chance to build skill, confidence, and a love of technology without the pressures of responding to shocking or abusive content before it is developmentally appropriate.

However as we have discussed, over-reliance on risk-focused interventions such as filtering and blocking is not an effective way to promote digital resilience. This was borne out by our 2014 research with the Oxford Internet Institute, which found that high levels of parental monitoring and restriction were negatively correlated with resilience and positive outcomes.^[24]

Relying on technical tools to keep all risk away from children disadvantages them. Without some limited exposure to risky situations, as Newman rightly points out in the previously cited 2002 review, children will not learn to make necessary judgements about the online world. They will be less prepared to decide who is and isn't trustworthy, how much time spent online is too much, what's acceptable to share on social media and all the other decisions that make up effective self-regulation in the digital age. Risk-focused interventions in isolation also fail to adequately address the wellbeing component of Dr Panter-Brick's definition of resilience. Limiting exposure to risk helps facilitate harm reduction, but is by itself insufficient to encourage positive outcomes like confidence, happiness and competence.

Asset-focused interventions

Asset-focused interventions equip young people with the resources they need to foster resilience and achieve positive outcomes. One example, in the context of digital resilience, is appropriate online safety education. Such an education programme would focus not just on the risks of technology, but on appropriate, safe and enjoyable ways for young people to use it.

Programmes to support young people's digital literacy and technological skill are another example, with solid evidence of efficacy. In our 2014 report *A Shared Responsibility*, we found that high levels of

23. Action for Children. (2007).

24. Przybylski, A et al. (2014).

confidence and digital skill were correlated with safety and positive outcomes online.^[25]

Constructing online spaces that are either designed for young people or built with their needs in mind is another potential asset-focused intervention. It is worth noting that in Parent Zone's 2016 report *The Perfect Generation*, some of the young people interviewed expressed strong support for dedicated 'sections' of social media platforms where children could interact with, and see posts from, people their own age.^[26]

Process-focused interventions

Process-focused interventions '**mobilise the fundamental protective systems for human development**'^[27] They describe interventions designed to do things like strengthen crucial attachment relationships, honour cultural traditions and foster healthy cognitive development.

It comes as no surprise that process-focused interventions are critical in promoting digital resilience. Perhaps the clearest finding of *A Shared Responsibility* was that a high quality of at-home parenting made the single biggest difference in achieving positive outcomes for young people online.^[28] Positive and supportive family relationships are an excellent example of a fundamental human protective system.

Building on this evidence, there is a clear case for a process-focused intervention to build digital resilience that centres on parenting. Parents and carers who are educated about the benefits of an authoritative parenting style and have gained the skills needed to apply it to the digital world are a crucial part of any strategy to make children digitally resilient.

Conclusion

To keep children safe in the modern world, we must build their digital resilience.

We define resilience as '**a process to harness resources to sustain wellbeing**,' and digital resilience as the application of this concept to technology, the internet and the digital age.

The evidence supports a digital resilience strategy that is informed by this definition and includes risk-focused, asset-focused and process-focused interventions.

25. Ibid.

26. Rosen, R. (2016).

27. Lopez, S. J., & Snyder, C. R. (2011).

28. Przybylski, A et al. (2014).

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