

# Just One Click

## How digital design puts children at risk

WARNING: This note contains content on the themes of disordered eating and self-harm which may be distressing to readers.

### Background

In 2021 5Rights published *Pathways*<sup>1</sup> - a study looking at how the design choices of digital products and services impact the lives of children. Using avatars – online profiles based on real children - this study found that design features enable automated pathways which can lead children to graphic images of self-harm, extreme diets, pornography, extremist content and introductions to adult strangers.

One year on, we worked with expert behavioural researchers at Revealing Reality to repeat parts of the experiment to see if anything has changed for children online.

### Just One Click: methodology

Revealing Reality met with 10 children ages 10 to 16 in the UK. They adopted **three methodologies to carry out this research:**

- **In-depth interviews** covered what digital services the 10 child participants use and how they use them, as well as exploring their hobbies and interests.
- From these interviews researchers created online profiles modelled on each child called **avatars** to experience how the children interact with the digital services and how the services interact with them.
- Using the children’s hobbies and interests, researchers also mapped potential **click journeys** of the children. This was done by searching for a topic each child was interested in and measuring how long it would take them to be recommended inappropriate content online.

### Just One Click: key findings

In 2022 Revealing Reality met with 10 children aged 10 to 16 in different parts of the UK to understand how they experience being online. From these interviews, they created avatars and undertook ‘click journeys’ mimicking the children's behaviour online.

In *Just One Click* researchers concluded that digital design is still putting children at risk. The study found:

Children are not prevented from viewing harmful content, recommendation systems nudge them towards it

- An avatar based on Josh who is 11 and lives in Derby was recommended images of knives on Instagram with the caption “this is what I use to self-harm.”

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<sup>1</sup> Pathways, 5Rights, [link](#)

- Emma who is 15 and from Swansea saw a video of someone shooting themselves on her 'For You' page on TikTok. She has also seen content that she felt 'romanticised' eating disorders, such as videos of skinny models and 'recovery' videos, and some content about depression.
- An avatar based on Amelia, aged 16 from North London, was recommended images of anorexia with one image including the caption "the pros of anorexia" on Instagram.

Automated pathways like auto-complete direct children towards harm

- Typing the term 'restricting' into TikTok produces recommended auto-completes such as "restricting binging", "restricting food", "restrictive ed (eating disorder)".
- Typing the first three letters of 'Wattpad' (a popular children's fanfiction website) into TikTok produces auto-complete options including BDSM themed pornographic content.
- Typing 'depressed' into Instagram produces suggested hashtags such as "depressedmemesfordepressedteens" and "depressedlife".

Design features lead children from innocent searches to harmful content very quickly

- One search and one click led from 'Slime' to pornography on Reddit.
- One search and one click led from 'Minecraft' to pornography on Reddit.
- It took only three clicks from 'trampolining' to reach eating disorder content, and under 15 clicks to self-harm content on TikTok.
- A search for 'Ariana Grande' on Google led to explicit and sexually violent content on Wattpad. Wattpad is available for people aged 13 years and over.
- Amelia who is 16 and lives in North London told researchers that was recommended content promoting eating disorders on Twitter after she searched for workout related content.

Content warning messages and barriers can be easily bypassed by children

- A search for 'proana' (pro-anorexia) on Instagram leads to a warning message which is easily bypassed with just one click to view search results. These results included images of emaciated bodies and messages such as, "Why can't I be skinny like all the other girls. Why am I always the fat one."

Children can be contacted on social media by adults they are not 'friends' with:

- A child's avatar based on a 15-year-old girl was 'private messaged' on Instagram by a user the avatar did not follow. The message appeared to be from an adult encouraging them to click a link to pornographic content on an instant messaging service, Telegram. Instagram says that it does not allow adults to message children who are not already following them.
- An avatar based on Caleb who is 16 and lives in Durham was messaged by an adult on Instagram encouraging him to click on links that led to pornographic content on other websites.

Weak age assurance systems easily allow children onto social media platforms

- Amy is 10 from the Wirral. Her Instagram date of birth is set to 1988 which is her mother's year of birth. While researchers were using Amy's avatar, her Instagram account was able to see sexual content and was contacted by what appeared to be an adult account offering links to sexually graphic content.

Design features and weak age assurance systems continue to amplify and spread harmful content to children

One year on from *Pathways*, researchers found that children are still being exposed to harms online.

Through design features such as autocomplete, search functionalities and weak age assurance, digital service providers continue to enable easy access to harmful content.

The findings also demonstrate that where providers have put in their own 'safety features' these are weak and easy for children to avoid.

Warning messages and links to resources which appear when certain terms are searched (like self-harm or eating disorders) are easily bypassed with just one click.

Weak age assurance systems enable adults to register as children's accounts bypassing measures which prevent unknown adults from messaging children who do not follow them.

How we can fix this

The Online Safety Bill must go further to tackle the true drivers of harm - the design choices of digital service providers which amplify and spread of harms online.

In order to meaningfully protect children wherever they are online, the Bill must:

- The Bill's scope must include any service 'likely to be accessed' by a child.
- Children's risk assessment and safety duties must consider the 4C's of online harms to children<sup>2</sup> - content, contact, conduct and contract - to fully address the risks to children online.
- The Bill must set out the 'rules of the road' for age assurance, to ensure its effective, proportionate and privacy-preserving use.
- The Bill must cite the UN Convention on the Rights of the Child (UNCRC)<sup>3</sup> and General Comment 25 (2021) on children's rights in relation to the digital environment.<sup>4</sup>
- The Bill must create a transparent process for bereaved families and coroners to access data.

About 5Rights Foundation

5Rights develops new policy, creates innovative frameworks, develops technical standards, publishes research, challenges received narratives and ensures that children's rights and needs are recognised and prioritised in the digital world. While 5Rights works exclusively on behalf of and with children and young people under 18, our solutions and strategies are relevant to many other communities.

Our focus is on implementable change and our work is cited and used widely around the world. We work with governments, inter-governmental institutions, professional associations, academics, businesses, and children, so that digital products and services can impact positively on the lived experiences of young people.

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<sup>2</sup> The 4Cs: Classifying Online Risk to Children, Sonia Livingstone and Mariya Stoilova ([link](#))

<sup>3</sup> UN Convention on the Rights of the Child, ([link](#))

<sup>4</sup> UN General Comment 25 (2021) on children's rights in relation to the digital environment, ([link](#))