HOUSE OF COMMONS

Science and Technology Committee

Oral evidence: Impact of social media and screen-use on young people's health, HC 822

Tuesday 22 May 2018

Ordered by the House of Commons to be published on 22 May 2018.

Watch the meeting

Members present: Norman Lamb (Chair); Vicky Ford; Bill Grant; Darren Jones; Stephen Metcalfe; Carol Monaghan; Neil O'Brien.

Questions 1 - 159

Witnesses

I: Matt Blow, Policy and Government Affairs Manager, YoungMinds; Sue Jones, Global Deputy CEO, Ditch the Label; Carolyn Bunting, CEO, Internet Matters; Dustin Hutchinson, Research and Policy Analyst, National Children's Bureau; and Duncan Stephenson, Director of External Affairs and Marketing, Royal Society for Public Health.

II: Amy Orben, Lecturer in Psychology, British Psychological Society; Dr Lucy Betts, Associate Professor in Psychology, Nottingham Trent University; Dr Mark Griffiths, Distinguished Professor of Behavioural Addiction, Nottingham Trent University; and Dr Andrew Przybylski, Director of Research, Oxford Internet Institute.

Written evidence from witnesses:

Witnesses—Panel 1 (9.30am)

- Young Minds (written evidence)
- National Children's Bureau (written evidence)
- Internet Matters (written evidence)
- Royal Society for Public Health (written evidence)

Witnesses—Panel 2 (10.30am)

- The British Psychological Society (written evidence)
- Nottingham Centre for Children, Young People and Families (written evidence)

- International Gaming Research Unit, Nottingham Trent University (written evidence)
- Prof Andrew Przbylski (written evidence)

Examination of witnesses

Witnesses: Matt Blow, Sue Jones, Carolyn Bunting, Dustin Hutchinson and Duncan Stephenson.

Q1 **Chair:** Welcome, all of you. Thank you very much for coming. I will get you to introduce yourselves in a moment. It occurs to me that there are five of you on the panel, which is quite unusual. We will be here forever if you all answer everything. My plea to you is to be really disciplined in giving short, succinct answers. If you take a long time, other people will not have the chance. Please don't feel obliged to answer every question. If you feel that you have nothing significant to add to what others have said, don't feel you have to answer. May we start with brief introductions?

Sue Jones: I am Sue Jones, deputy CEO for Ditch the Label, an anti-bullying charity.

Matt Blow: I am Matt Blow, policy and government affairs manager for YoungMinds, a youth mental health charity.

Duncan Stephenson: I am Duncan Stephenson, director of external affairs for the Royal Society for Public Health.

Dustin Hutchinson: I am Dustin Hutchinson, a policy and research analyst at NCB. I am representing Young NCB, which we consulted, and the Anti-Bullying Alliance, which NCB hosts.

Carolyn Bunting: Good morning. My name is Carolyn Bunting. I am the CEO of Internet Matters. We are a not-for-profit organisation that is founded and funded by industry. We want to ensure that children have a safe and age-appropriate experience online. We do that through our work with parents, where we educate and empower parents with the right tools, advice, help and support they need.

Q2 **Chair:** Thank you. I will start with some questions. I would be grateful if I heard from you about the risks and benefits of social media, particularly to children and young people. What is your view on whether and how we can hold social media providers to account for harms that may occur as a result of use of social media?

Carolyn Bunting: We really want to be the voice of parents in this arena. We have done some very recent research—in April—that suggests that over 60% of them are concerned about the impact that social media have on their children's wellbeing. In fact, as many as 17% say that their children have had a problem with social media and their wellbeing. We think that further research needs to be done to establish a causal link between social media and mental health—it is an area we are very concerned about. We welcome the response to the Green Paper about a statutory code of practice for social media operators. That can only help.

Q3 **Chair:** You talk about a causal link. Are you aware of any evidence, from

anywhere, that points to a causal link?

Sue Jones: We know from our research that a lot of young people feel very impacted in their mental health. They feel that a lot of pressure is put on them. That is especially true of young females. A lot of their worth is placed on how they look, how they present and the likes and validation that they get. If they put up a photograph and get negative comments, the impact on them is quite large.

Additionally, a lot of young people show their true self online. For example, in an offline environment, they may not be out as a young person, but they may be out online. If that true self is then attacked in some way, the impact on them is quite far-ranging.

We need to look at why they are not able to be themselves in an offline environment. There is certainly a lot of impact on young people and how they feel about themselves.

Duncan Stephenson: Last year we published our report "#StatusOfMind," which looked at the positives and the negatives. There are a lot of positives to support young people's mental health and wellbeing. We know that it is a place for peer support, particularly if you have a mental health issue, but we also know that there are some challenges.

One of the big issues is around sleep. One in five young people are constantly checking their phones and waking up. That is having an effect on their mood and self-esteem.

It is a nuanced picture. Social media is not all bad; the issue is how it is used. There is something called active participation versus passive consumption. If you are using social media and are participating, that can be a positive, but smartphones are geared towards consuming information. There is some evidence that, if you are just consuming information, it impacts on levels of anxiety.

Q4 **Chair:** Is there a particular concern about children and young people who may already be vulnerable for various reasons: children in care and children with existing mental health issues?

Duncan Stephenson: The positives of social media are possibly more beneficial to those with low self-esteem, for example. They can be more beneficial to the LGBTQ community, because they provide peer support at a vulnerable age, but the negatives, such as cyber-bullying, might affect those who are more vulnerable—those with low self-esteem.

Dustin Hutchinson: When we consulted young people, they were very clear that there were clear harms in social media that had a negative effect on their self-esteem. They were always seeing other people highlighting a positive experience. There was a tendency for social media to encourage materialism and a culture of comparison. There was

addiction and cyber-bullying, and there were negative issues about body image.

Young people were also clear about the benefits of social media, which helped them to connect with people, to bond and to feel less lonely. They saw social media as a form of self-expression and creativity, and felt that they could learn from and find inspiration in other people's struggles.

Interestingly, as well as being aware of the harms, they were aware of ways in which they could mitigate those harms. The young people we spoke to were actively putting things in place to mitigate some of the harms of social media.

Q5 **Chair:** Do you think that it is quite important that we have a balanced view in the public discourse of the positives and negatives of the use of social media? Is that a theme you all agree on?

Matt Blow: Yes, completely. When we talk to children and young people, they generally report that social media has a positive impact on their lives. We have just carried out an inquiry with Alex Chalk MP and the Children's Society. We did a survey of over 1,000 young people on the impact of social media on their mental health and aspects of their lives. Sixty-two per cent. of young people reported that social media had a positive impact on their friendships and family relationships, even though we found that two fifths of young people reported that it had a negative impact on their self-esteem. It is a really nuanced picture.

Young people will use social media in different ways. No two individuals will use it exactly the same. Some, particularly those who are experiencing emotional distress or mental health problems, will get benefits from a peer support network. There is access online to health information or information about how to self-manage. There are also lots of benefits around connectivity—but there is that vulnerability. We found that those who are currently experiencing a mental health problem were three times more likely to experience cyber-bullying.

Q6 **Chair:** We have had lots of submissions about the exposure of children, in particular, to pornographic websites, about microblogs having material that is violent in nature, and about the link with eating disorders, the encouragement of behaviours that might be dangerous—self-harm and so forth—and even suicide. What are your concerns about that content?

Dustin Hutchinson: Young people were clear that a lot of the age limits on social media sites and other sites did not necessarily work. They said that there would be age limits of 13 and that, if they wanted to get around those, they could just put in a different date of birth. They were also clear that sometimes explicit content came on to their feed without them actively clicking on it. It was not a choice to engage with this stuff.

Q7 **Chair:** Do you think that finding ways of enforcing age verification is important? The Secretary of State has raised that issue and has presented a challenge to social media companies. Is that important?

Should the Government be finding ways of imposing age verification?

Duncan Stephenson: Absolutely. I work for public health. If we have parity of esteem, and if young people's mental health and wellbeing is being affected by social media, why should that be treated any differently from other risk factors, such as smoking and drinking? Yes, there are positives around social media, but we should look at how we can graduate usage, particularly for those who are vulnerable under the age of 16.

Q8 **Chair:** Do you think that it is achievable to have an effective age verification system in place that works and cannot be circumvented very easily?

Carolyn Bunting: It is a real challenge. Increasingly, parents are left with a very difficult choice between allowing their children on to an environment, because all their peer group is there, and they will be left out if they are not, and trying to enforce age restrictions. It is a very difficult area.

The challenge is that children will always want to get on to things before they are allowed to. We also know that children are prepared to try to find ways around things. That is generally what parents tell us. They think that their children know more about it than they do. One of the most critical points is that I do not think that we can use technology and regulation to find our way out of this situation. This is really a cultural and societal issue. It is really all about education of children and parents in this space.

Q9 **Chair:** Do you think that there are no technological solutions, or do you just think that they are not appropriate?

Carolyn Bunting: We would equally welcome technical solutions in this space. It is great to have a backstop so that parents have something to rely on, but ultimately this is about educating our young people to behave online. The environments that we have offline should be the same as those that we have online.

Q10 **Neil O'Brien:** Are any of you aware of any thoughts about how a technical solution might work? If you are trying to have an age limit at 18, you can use credit cards, the national insurance number or something like that. I do not know whether in the community there are any ideas about how you would do this.

Carolyn Bunting: We have just seen Facebook launch its parental consent for Germany, where the GDPR means that consent is going up to 16. When children go on to create their account, they have to find their parent, who has to authorise either via Facebook or by email that they are over 13. It is not 100%. They are working towards a better solution, but that kind of solution is worth exploring much further.

Q11 **Darren Jones:** On this technical solution, I am always amazed that

companies are not talking about the national pupil database, because we collect verified dates of birth for all our children who are at school. It seems to me that that could be done pretty simply.

We talk about the age of consent. Duncan, I noticed that just now you said 16. Of course, the age of consent under UK law is 12. This Friday, when the GDPR comes in, it will go up to 13. When you talk about young people and consent, do you have a view on where that should be in the span between 13 and 16, which the European Union has set as the age range for defining this issue?

Duncan Stephenson: I guess that it varies. Another public health challenge that we have at the moment is gambling. We know that 70% of young people have seen gambling ads on social media, but the age at which you can gamble is 16 or 18, depending on whether it is a lottery or a betting shop. Young people are being exposed to that risk factor at a younger age. Should it be brought into line with other age restrictions? I do not know.

Q12 **Chair:** Should we think of cyber-bullying differently from other forms of bullying? Is the issue the intensity of it—the sense that you cannot escape from it? How do we respond to it?

Sue Jones: I do not think we should treat it differently. It is another platform for the same bullying. It is further bullying. If a young person is experiencing bullying in what we consider to be the traditional environments, such as school, they go home and there is no escape. Safe places have gone. You can be bullied in front of your friends or family. It can go on at the dinner table or in the family car. It can be from somebody on the other side of the world, whom you have never met before. We need to treat cyber-bullying with the same seriousness and to provide the same proactive and reactive supports. It is just that the impact is further on. If a young person is already feeling really bad, this impacts on them further.

Q13 **Chair:** Is there anything more that we can do? Is there anything that providers should be doing, too?

Sue Jones: I am not sure that it is down to just one person. I know that we have spoken about societal approaches. One of the things that I think is missing is real media information literacy within education, from a very young age. We have talked about phased approaches to technology, but we also need to teach young people how to navigate the internet critically—all of it, whether it is social media platforms or websites. Basically, we have said to young people, "There is the world. There you go—have fun." There is often a gap in knowledge for adults and parents, and we assume that young people can use that technology. On a practical level, they can, but how are they navigating what that actually means? Are they becoming desensitised to it? Are they shocked by it? What are the long-term impacts? This should be phased in at school. I appreciate that we already give teachers so much work to do, but there is a massive lack of media information literacy.

Matt Blow: I agree with the educative point. In our inquiry, when we heard from young people, they said that the response from social media companies if they reported bullying was very slow and inadequate. They did not know what to expect. Quite often, they also did not know what the rules were around how to behave online or on the platform.

Q14 **Chair:** Is it easy to report to the social media companies?

Matt Blow: Generally, the larger companies tend to have better reporting mechanisms, but one of the things that young people said was that they did not know what the consequence of their report would be. They would make a report, but they would not see that anything had happened. There was no comeback. They never heard back from the social media company.

Q15 **Chair:** You would say that that is a clear area where social media companies need to up their game.

Matt Blow: Yes. They also need to make young people aware of what the rights and responsibilities on the platform are.

Sue Jones: We still get many young people who we assume are digitally savvy asking us to report on the basic social media platforms. We are still having to provide support on that. As an organisation, we are what is known as a trusted flagger. Young people can come to us and say, "There is this post on Instagram that is highly offensive. They are teasing me." We can get that removed for them, because we have a relationship with those organisations. There needs to be more of that. We currently have it with Google, Facebook and Instagram. There is a way of doing it, but it is for us to do. Young people have to find us first.

Q16 **Chair:** That is an invaluable service, but a child ought to be able to do it directly.

Sue Jones: They have to find us first to do it. There are many organisations that can do it. That really helps the platforms, because they are overwhelmed by reports. It is easier for us to look at something and to make a critical decision about whether there is an issue, but it needs to be taken seriously a lot more. Young people tell us all the time, "I reported, and nothing happened."

Dustin Hutchinson: We found evidence in the Anti-Bullying Alliance that there is a real relationship between bullying in the real world and cyber-bullying. As Sue said, they are not separate, distinct worlds for young people—each is just as real as the other, and they both have an impact on them.

With some elements of cyber-bullying, a slight difference can be the degree of separation. Sometimes, because they cannot see the reactions of the people they are cyber-bullying, there can be a tendency for people to be harsher or to bully in different ways.

We have had clear evidence of the impacts of cyber-bullying. There is evidence from the Anti-Bullying Alliance that it affects emotional problems, stress, anxiety and depression. We have also heard that there is a relationship between being cyber-bullied and bullying other people. There is no clear distinction between victims and bullies. People can be in a bully-victim relationship.

Carolyn Bunting: Cyber-bullying is one of the issues parents are most concerned about. One of the key things is transparency. We need to have greater visibility of both the reporting mechanism and of what kind of content is and is not being removed, so that when a situation arises you know what the outcomes are going to be.

Chair: Vicky has a quick question.

Q17 **Vicky Ford:** It is on the issue of reporting and take-down. My impression is that some of the older, more established sites may be easier to report to, but younger people are getting into newer sites all the time. Would it help to have some industry standard, so that people could identify easily how to report?

Matt Blow: Yes. I agree with that. There also needs to be something around communications, so that young people can understand what will happen if they report. That is really important as well.

Q18 **Vicky Ford:** Should anything else be in that standard?

Dustin Hutchinson: I echo the point that was made earlier about feeding back to people. Often young people say that they report something, but they do not know what happens as a result. There should be some feedback mechanism.

Q19 **Chair:** I guess that it can increase the anxiety if they are waiting to hear and do not know what is going to happen.

Sue Jones: Yes. If they then go and check whether the content has been removed and it is still there, they are constantly being triggered, so they are having to see it all the time. As part of that, they have to provide us, even as trusted flaggers, with the content, so that we can check it. Therefore, you still have to access that material.

Q20 **Carol Monaghan:** I am the mother of an 11-year-old daughter who has been badgering me for about six months to get her a social media account. I consider myself to be well informed and educated in this area and think that I probably have more of the facts at my disposal than many people, but I am feeling the pressure of an 11-year-old who is desperate to communicate with her friends, many of whom already have this.

We know that 13 is the age restriction for many of the social media sites. I cannot see that in two years' time I will feel that much happier about it. Is 13 too young? Even assuming that we sort out the technological stuff you have just been talking about, what would prevent me as a parent

from overriding that because of the power of my 11-year-old?

Carolyn Bunting: As a parent, it is hugely challenging. We do not want to ban children from the internet. The internet provides a wealth of positive experiences, in education, communication and learning. It is a really difficult challenge to sit here and say, "There is one age when suddenly everyone is capable of being on social media. You are mentally prepared for it and are mature enough to deal with what you are going to see, so off you go." I think that it will remain a very nuanced debate. Parents are best placed to know when their child is ready to go online.

The challenge is that not all parents will care. We have to work hard both to target parents at a broad level and to reach more vulnerable groups. We might need to have a different type of approach for children and parents who are particularly vulnerable.

Q21 **Carol Monaghan:** Perhaps it is not so much that the parents do not care, but that they are busy, have stresses and are living in a difficult environment. All those things can make a difference as well.

Duncan Stephenson: Absolutely. I do not envy parents. It must be a huge struggle, and there must be huge pressures. The onus should not be put just on the parents. That is why education is key. Education should start before children and young people are using social media, so that they are digitally savvy and can be resilient. The pressure should not be placed just on parents, children and young people. Social media platforms need to step up.

Dustin Hutchinson: It is really important that education works not just by scaring young people about the risk, but by engaging with them about the benefits and helping them to understand social media. It is also about educating parents, so that you can get a situation where there is a dialogue between children and parents, and they feel that they can talk about the risks and the challenges of social media together.

Q22 **Carol Monaghan:** The NSPCC has co-authored a report with some fairly shocking statistics in it. It says that 48% of 11 to 16-year-olds have seen online pornography and that 46% have stumbled across it by accident. We know—I think that this was from the girl guides—that 31% of girls aged between 13 and 17 have received unwanted sexual messages. We have talked about the technological challenges of putting in age restrictions. Is that the answer, or is there more to be done?

Sue Jones: We need a phased approach from everybody. I do not think that it is as simple as one person doing something. It is a combination of parents and caregivers doing one thing, education doing another and the networks doing something else. It is not about one person—it is about a multi-stakeholder approach. Personally, I think that it needs to come from all of those. There is not just one answer.

Q23 **Carol Monaghan:** One school got in touch. It talked about the trend for young people to send compromising photos to others. Often, but not

always, it involves boys asking girls to send them. Should social media companies be doing more, or should schools be stepping in here as well?

Dustin Hutchinson: This is largely about the topic of body image. Young people talked a lot about the fact that a lot of provocative pictures are posted by models and bloggers, which can put pressure on young people to replicate that behaviour and then to view their own self-worth and popularity in terms of how many likes or followers they get. That seemed to be quite a culture that was happening.

Q24 **Carol Monaghan:** Does it include even compromising pictures?

Dustin Hutchinson: Potentially. The young people also talked about campaigns on social media for positive body image. They thought that those were really helpful and found it reassuring to see some celebrities, campaigns and hashtags talking about positive body image. That was something that they saw on social media.

Matt Blow: As you have said, young people are active generators of online content, which might include compromising images, through instant messaging between peers. It is quite difficult fully to restrict access to content. There really needs to be a focus within digital literacy on helping young people to build digital resilience, so that, when they encounter harm, they know how to respond and are able to mitigate it themselves. That needs to be part of the focus of the education.

Sue Jones: My point follows on from that. Teaching around consent—what you are and are not comfortable sharing—is really important. We do not want young people to be shamed for their bodies, their sexuality and all those things, and we do not want them to feel pressured into doing things before they are ready. We need to have very clear, open conversations about consent and the fact that people have agency over their own bodies.

Q25 **Carol Monaghan:** We also heard that some schools are giving out iPads. If I may consider myself again as the parent, what if a school is giving out an iPad that has no filters on it, because the school's social media policy lacks consistency or it has not thought it through? Is there enough guidance from the Department for Education on how devices should be used in learning?

Sue Jones: I think that it is a bit hit and miss. Some schools have tried to go paper free—that is how it started for a lot of schools—but it does not encourage some away time, to switch off. There are ways of integrating it well, because some children will learn very well in that way, but I am not sure that it should be the whole approach.

Carolyn Bunting: At least within the school environment schools have to have appropriate filtering in place. When using devices that are connected to the school's broadband network, appropriate filtering needs to be in place.[1]

Q26 **Chair:** You say that they have to have it. What makes them have to have it? We are told that it is inconsistent.

Carolyn Bunting: Really? Okay.

Q27 **Chair:** Some schools hand out iPads without filters, as Carol has said.

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[1] Note by witness: My understanding is that this is requirement is covered by the Department for Education's statutory guidance 'Keeping Children Safe in Education' which obliges schools and colleges in England to "ensure appropriate filters and appropriate monitoring systems are in place. Children should not be able to access harmful or inappropriate material from the school or colleges IT system" however, schools will need to "be careful that "over blocking" does not lead to unreasonable restrictions as to what children can be taught with regards to online teaching and safeguarding." However clearly if a school device is used outside of the home, then it is likely that the device will follow the filtering that is set on either the home broadband or mobile network as appropriate. As with all of these things technological solutions have a part to play—and will work best when coupled with a public education programme—to raise awareness of the issues, to inform about the technical tools and to help parents talk to their children about their online lives. This should be the clunk-click campaign of our time, and if the Committee is looking for concrete recommendations we would urge you to make this one of them. You heard from all of the panellists that the public discourse in this area would benefit from a more nuanced debate, and we welcome your Committee's contribution to that debate.

Note by Michael Bell, Safeguarding in Schools Team, Dept for Education: I wanted to confirm that what Carolyn Bunting sets out above is correct. The statutory guidance sets out that schools and colleges should have appropriate filtering and monitoring systems in place. We have worked with the UK Safer Internet Centre to provide advice as to what "appropriate" might look like. This is signposted from the statutory guidance. We also make the point that children will of course have access, generally via 3G and 4G to the internet if they are on their own devices. Schools and colleges should consider how they manage mobile devices and have a policy in place.

Others have clear policies in place. You say that they have to do it. Is there a law that says that? Is there guidance from the DFE?

Carolyn Bunting: I thought that there was. Let me go away to find that guidance and send it to you. I do not know whether anyone else can comment.

Matt Blow: My understanding is that it was e-safety guidance from Ofsted, which specifically mentions the notion of filtering.

Q28 **Carol Monaghan:** Does that affect only iPads that are being used within a school environment? If they are being sent home with children, they could be used without filters.

Carolyn Bunting: Yes.

Q29 **Carol Monaghan:** So some restrictions should be in place on them.

Carolyn Bunting: When it comes to filtering in the home, a raft of tools are available to parents to control access to adult content. They are not taken up broadly. More could be done to educate parents about the fact that they exist and that they could use them. We also welcome the age verification that will come in later in the year, to age-verify when you go on to an adult content website.

Q30 **Chair:** Can't it be the default position when the equipment is purchased to start with?

Carolyn Bunting: Absolutely. Interestingly, Virgin Media announced just last week that now its filtering will be default on for all new customers. Sky is already in that situation. Others offer a service where you choose—

Q31 **Chair:** Should that be a legal requirement when selling to a child under a specific age?

Carolyn Bunting: I do not know. What we need to do is educate parents about the rafts of tools that are available. You can control and filter the content that comes in through your home wi-fi. It is never going to be 100%.

Q32 **Chair:** Doesn't that potentially leave the most vulnerable children most at risk?

Carolyn Bunting: Potentially, yes.

Q33 **Carol Monaghan:** Would it better if there was an opt-in to adult content, rather than an opt-out?

Carolyn Bunting: I think that that is how the mobile networks do it. It is an opt-in. Basically, you have to prove that you are over 18 to get access to adult content.

Dustin Hutchinson: The young people we spoke to talked about a range of roles for social media companies and technology companies. They

talked about having warnings of the dangers on social media sites and of having simple explanations of protected privacy settings that young people could understand on the sites. They also talked about having simple reporting methods on the apps and were in support of having phones that restricted access to inappropriate content. There were even certain news elements that they did not want. They thought that it would be appropriate to put that on the phones.

Q34 **Bill Grant:** As a Committee, we recently met parents, children, teachers and, indeed, those who manage cadets on a weekly basis. It was clear among those individuals that their greatest concern was cyber-bullying. That has been reflected in some of the comments that you have made this morning. What features and aspects of social media make them the preferred platform for bullying? What is the attraction? What are the elements and aspects of social media that make it so easy to become an online bully?

Sue Jones: Anonymity could be one. You can be whoever you want to be online. That is a huge one. It is very easy to be completely anonymous. It is also very easy to track people down. The search engines are now incredibly powerful. You can find almost anyone, whether they are random people or people you know. Anonymity is a huge challenge.

Duncan Stephenson: With social media, bullying is not limited to the school gates now—it is 24/7. There are rapid vehicles for circulating messages of hate. They are set up in that way.

We also live in a very visual age. Understandably, apps such as Instagram are about appearance and photographs. People will be judged on their appearance, hence messages around bullying about appearance.

Q35 **Bill Grant:** You can be judged and mocked.

Duncan Stephenson: Yes—judged on your appearance.

Matt Blow: There are two other small points. One is the lack of adult oversight sometimes. Social media uses mobile phones or tablets to access lots of private spaces where adults do not see what is actually happening, in the way they would in a school.

There is also a disinhibition effect in using the internet. One of the things that we picked up quite considerably throughout the inquiry was the notion of bystander behaviour. If bullying was happening in the school playground, quite often the other children would not get involved or would tell the teacher, for example. When it is happening on social media, the fact that other people can see it and are not intervening can have a negative impact. We heard some really shocking stories about "I hate so-and-so" groups being set up on social media accounts that are followed by hundreds or thousands of people. For the young person who is experiencing that bullying, the scale of it is extended considerably, which can be very damaging.

Dustin Hutchinson: In social media, they talk about the social media footprint. The Anti-Bullying Alliance uses the term "social media tattoo," in the sense that, when something is up there, it can be very hard to remove for the young person. It stays there and is a permanent record of the bullying or humiliation that they have experienced.

Carolyn Bunting: The internet never sleeps. Children face bullying 24/7. It is very easy to do, is totally anonymous at times and can reach vast audiences. As other people on the panel have said, it takes repetition to a different level. Basically, children can revisit the bullying over and over again.

Q36 **Bill Grant:** May I ask a wee supplementary about what you said, Matt? You mentioned what I would describe as traditional bullying, in the playground or the street. Then you have this modern platform. Is there an intertwining of the two types of bullying? What comes first, in general terms? Does the playground migrate to social media, or does social media migrate to the street or the playground? Is it common for them to be intertwined, or do they operate in isolation?

Matt Blow: The evidence shows that the prevalence of offline bullying is still significantly higher than that of online bullying. A big survey last year by *The Lancet* showed that less than 1% of young people are bullied online and not bullied offline, so it is very connected. Generally, it involves the same people, but it is a slightly different experience and can have slightly different effects.

Sue Jones: It varies quite a lot from platform to platform. For example, if somebody is experiencing abuse on Twitter, often the response is very supportive. Other people will come in as a support. That is less so elsewhere. It can vary widely, but it may not necessarily happen on Instagram or Facebook. On Twitter, we analysed 20 million conversations over a four-year period. Overwhelmingly, if people were being targeted, the supportive response was significant. It does vary.

Q37 **Bill Grant:** Caroline, in your submission, you told us that it can be difficult for parents to spot the signs of cyber-bulling. We are all clear about that. What could or should parents—or, indeed, in cases like me, grandparents—do to reduce the risk or to spot the signs of bullying? If we jump that hurdle and it does happen, how do you advise them to deal with it?

Carolyn Bunting: In the first instance, we really encourage parents to think carefully about letting their children on to social media in the first place. That goes back to the point about whether they are mature enough to deal with what could be an adult environment, essentially, and to understand that people say harmful things. There is a phase of education around setting up and making sure that children understand what they should do in certain circumstances. If they see anything upsetting, they should talk to a trusted adult—to you, their teacher or whoever.

There is then a sense that we should help parents to make sure that they are continually checking in with their child, to make sure that they are happy and that everything is going well. Then we need to help them to spot the signs of when things are going wrong.

In our research with parents, they say that, intuitively, they are more likely to know that something is going wrong because of a change in the child's behaviour—for example, if they are withdrawn or they always jump when the phone bleeps. Then we need to put appropriate support in place for parents to get the help that they need and to access professionals, and for schools to step in and support them, in line with their bullying and cyber-bullying policies.

Dustin Hutchinson: Young people talked about the role of health professionals, as well as the role of education. They said that, when they had school counsellors, they would like those counsellors to understand the harms and risks of social media, so that they could have a meaningful dialogue and talk to them about some of the problems they were experiencing. They also suggested that GPs and doctors give health warnings on social media, in the same way as they give health warnings on other issues. It could be seen in that context.

Duncan Stephenson: Youth workers have a role to play as well, and we called for that in our report last year. Youth workers are ideally placed to support young people.

Matt Blow: There is some evidence that those young people who have experienced adversity in their childhood or family life are more likely to have a higher propensity for online risk-taking behaviour. It is important that the professionals who work specifically with those groups—social workers and youth offending teams, for example—have some training around understanding the impact of the online world on mental health.

Q38 **Bill Grant:** Are you pointing to children in foster care and looked-after children? They are quite distinctly higher risk. Is it they or is it those in whose care they are who need to be educated?

Matt Blow: Both, I think. Obviously, most people now have access to the internet, but there are some who have less access. There is also a point around these young people, as people who access the internet at a later age might not develop the skills around knowing about harms and how to respond to them. It is important to identify those people.

Sue Jones: We also need to take into account the fact that intersectionality comes into this a lot. For example, a young person is more likely to be targeted if they are LGBTQ+. They are also more likely to be targeted if they are a person of colour or if they have a disability. If you combine those factors, the rates go up even further, so there are some young people who we know will be more vulnerable.

Tone is lost. If you have young people who are on the autism spectrum, they will need additional help to access the internet. There are some wonderful things on there for them, but tone can be lost very easily. They can become vulnerable and not realise that they are experiencing bullying. They may think that it is quite amusing. We need to take all those factors into account.

Q39 **Bill Grant:** I am not pigeonholing people, but you have drifted on to the issue of particular groups. Is there a cultural impact to this? Are certain cultures more vulnerable to it than others? We are a broad church as a nation.

Sue Jones: We find continually that those who are LGBTQ+, people of colour, people of different abilities or those from a low socioeconomic background, and those who combine any of those factors, are always the most targeted groups of young people.

Q40 **Chair:** Those are the things that mark people out as different from their peers.

Sue Jones: Yes—if you are considered to be different. All these factors impact together. For example, a young person who is transgender and is also a person of colour is much more likely to experience bullying. There are groups of people—minority groups—who we know will be more at risk.

Dustin Hutchinson: On that point, the Anti-Bullying Alliance found evidence that disabled children and those with special educational needs were more vulnerable to cyber-bullying.

Q41 **Darren Jones:** We have been talking about the content of social media, but I want to have a conversation about the amount of time spent on social media. I know that all of you have had some involvement in that. What do you think are the risks associated with spending larger amounts of time on social media and on devices?

Duncan Stephenson: There is some evidence that, if young people spend more than three hours a day on social media, they have twice the risk of developing mental health issues and problems. It is very difficult, though—

Q42 **Chair:** Presumably, it is hard to know chicken and egg.

Duncan Stephenson: It is partly that. It is also partly complicated by the fact that it is about not just the amount of time spent on social media, but what you do—the context and the content that you are accessing. If you are spending that time getting peer support, et cetera, it could be a good thing. We just do not necessarily know. We need more research in this area.

Q43 **Vicky Ford:** Really? There has not been enough research into screen time and its impact.

Duncan Stephenson: In terms of what young people are accessing and how they are accessing it.

Q44 **Chair:** Is the issue determining a causal link? I can imagine that someone who is mentally distressed or has mental ill health may well end up using social media more in particular circumstances. Can it be the other way around, in a sense?

Duncan Stephenson: We need to understand the context and the content better.

Q45 **Darren Jones:** My hesitation—and, probably, Vicky's surprise as well—was for this reason. Are you really saying that there is a lack of evidence on the light from screens or the time on screens, as distinct from the content? A debate has been happening from members of the Government around putting time limits on this. As the Science and Technology Committee, we need to understand what the evidence behind that is and, therefore, what the recommendations should be. Are you saying that there is no evidence on this at all?

Duncan Stephenson: No, I am not saying that. There are lots of studies out there. Large numbers of people may not have been involved in those studies, but we think that people are probably spending too much time on social media. For example, one in three young people use the internet for six hours a day. There is quite a lot of evidence that two to three hours a day on social media platforms may be too much. It may be impacting on people's mental health and wellbeing. There is research from Public Health England as well. That is one of the reasons why we have advocated online pop-up warnings. The young people whom we surveyed supported that. Seventy per cent of young people support the idea that, if you spend two to three hours a day on social media or on screen time, something could pop up and say, "You are spending a bit too much time here."

Q46 **Chair:** Do you have any idea whether that would be effective?

Duncan Stephenson: I do not. That is why we need some more research.

Q47 **Neil O'Brien:** I was also surprised by what you said. What is the gold standard research on this? I am very struck by the fact that you have this idea about pop-ups. There is five a day for fruit and veg, but at the moment there is no agreed thing to unite behind on this—or am I wrong about that?

Duncan Stephenson: In September, we are launching scroll-free September, which is a campaign aimed at encouraging kids to scroll less. We want people not to quit social media, but to put it in the context of their everyday lives, so that they can go out and do other things as well. We say, "Social media is a positive, but try not to spend too much time there, because it could impact on your mental health."

Q48 **Chair:** We are not in a position to get anything, based on evidence, that is clear and simple, like the five a day, to give guidance both to parents and to children.

Duncan Stephenson: In the research that I did, I found that there are studies that say that two to three hours a day may be too much, and others that argue that six hours a day may be too much. I am slightly confused myself, so it would be good to get further clarification.

Matt Blow: The Royal College of Paediatrics and Child Health has done a review of screen time literature. Quite clearly, there is a link with sleep deprivation. With regard to mental health problems, the evidence from the young people we spoke to suggests that it can be two-way. Again, it is the chicken-and-egg point. Young people who are experiencing depression or anxiety may use social media in a way that exacerbates that mental health problem. They may be refreshing content continuously and not feel able to move away from that. At the same time, it may be that they have not felt able to speak to anybody in the real world and that they have found an online community that has been really helpful for them. There will be individual differences on the notion of what is the right amount of time, because some people will use social media for different purposes.

Q49 **Darren Jones:** The report you mentioned earlier, which you did with Alex Chalk, made the same three-hour claim. Is that the same evidence Duncan was referring to?

Matt Blow: It is different. An OECD study said that over a third of 15-year-olds in the UK use social media for more than six hours a day on a weekend day. We found in our survey that 29% of respondents said that they used social media for more than four hours a day on an average day, and 44% said that they used it for more than three hours a day on an average day.

Carolyn Bunting: We talk to parents, mostly. Sixty per cent of parents told us that they are concerned that their children do not have interests outside the web. To me, that is an overwhelming statistic. Six out of 10—60%—said that their children do not have interests outside the web.

We also asked them about social media. Sixty-three per cent said that they were concerned that their child spent too much time on social media, with 22% very concerned and 43% somewhat concerned.

The challenge parents have is, what is the advice? We all know that technology and the internet can be good and bad. I wonder whether the challenge is to turn the debate around and to say, "Instead of trying to define what is right about screen time, try to define what is wrong. Does your child have no other friends or no outside interests? Are they constantly glued to a tablet?" That is the kind of debate that we need to try to give parents, with better advice about this issue.

Q50 **Darren Jones:** Internet Matters talked about addiction features—this is

my language—in social media. What did you mean by that?

Carolyn Bunting: The currency of the internet is to keep you on there for as long as possible. That is the commercial model for these very big businesses, whether they be content providers or social media companies. As I am sure everyone else here will agree, you therefore see features such as snapstreaks, where, essentially, you have to keep bouncing back every day, in some sort of communication. It is a signal of the power of your friendship, so children are engaged in that. You have notifications going on all the time that are pinging you, telling you that people have posted and encouraging you to pick up the handset. It does not take long.

We all know as adults that we look at our devices between 100 and 150 times a day; I have read various numbers. In our survey, children said that if they were on social media they were posting 26 times a day. You have services that are encouraging you to be online all the time and parents who are saying, "I don't know what the right answer is. I need some advice. Tell me what the right answer is."

Q51 **Chair:** So there is a desperate need for guidance.

Carolyn Bunting: Yes.

Dustin Hutchinson: The young people we spoke to said that they definitely thought that they themselves and other young people whom they knew were addicted to social media. They felt that a lack of real life outside social media could be a real problem for them. They described that they knew other children who they felt could not cope without social media. They really thought that there could be a tendency for it to take over from real life.

Q52 **Darren Jones:** Are there any examples of good practice that you have seen? I do not want to brand-endorse, but I am conscious of the fact that on Apple, for example, my light changes now at 7 pm or so. When I was on the tube this morning, it said, "It looks like you are driving, so we have turned off your notifications." That is actually quite nice, in many ways. Are other companies doing that sort of stuff?

Carolyn Bunting: There are pop-ups on Nintendo that say, "You have been gaming now for two hours. It's time to take a break." I am not aware of the research that says whether that works, but we should certainly look into it.

Q53 **Vicky Ford:** I am quite keen to find real, specific recommendations of actions. You have talked about content filters. Should we build into the handset that it automatically has night light—that that is the automatic setting?

Carolyn Bunting: That can help.

Q54 **Vicky Ford:** But you can then override it.

Carolyn Bunting: My preference would be for us to try to educate parents to say, "Don't have the devices in the bedroom." We should start from there. If you start young, and they are not in the bedroom, that is not something that we need to do.

Q55 **Vicky Ford:** Understood, but I have a 16-year-old, an 18-year-old and a 20-year-old. Should the devices automatically come with night light that you have to switch off?

Duncan Stephenson: Totally. The default option should be the healthy option.

Q56 **Vicky Ford:** You mentioned pop-ups that state, "You have spent too long here." Should there also be an automatic pause? Has anybody trialled that?

Duncan Stephenson: We looked into that and sought young people's views on it. About one third supported automatic lockout, rather than just something that says, "You have been on too long. Self-appraise your use." That might be slightly more radical. It assumes that people are on the social media platforms for negative reasons or that it is harming—

Q57 **Chair:** Do we know how long Nintendo has had the warning that comes up after two hours? Perhaps we should write to the company to ask what analysis it has done of the impact of that.

Q58 **Vicky Ford:** Duncan, is that an area where you think it would be worth doing some research—not only on the pop-ups, but on timing people out for 10 minutes?

Duncan Stephenson: Absolutely. That is also why we are quite keen to trial the scroll-free September idea, just to see how difficult it is to quit social media.

Vicky Ford: Does everybody agree that that would be a useful area for research?

Carolyn Bunting: Yes.

Vicky Ford: Fantastic. I just want to make sure that we are getting on the record areas where you think we should make a recommendation, not just what the problem is.

Q59 **Neil O'Brien:** Is there any scientific evidence on whether night mode and softer lighting are beneficial, compared with white light? Has anyone seen a study on that? No.

Chair: We should not just make assumptions.

Vicky Ford: I have heard of studies.

Chair: We need to explore that. Thank you for that cautionary note.

Q60 **Stephen Metcalfe:** Before I come to the question that I was going to ask, I want to follow up on Vicky's point about the lockout option.

Duncan, you said that it was potentially too extreme. Is there a pressure on young people to be online all the time and to respond instantly to notifications, likes, requests and so on? Actually, the lockout is a way of breaking that and being able to escape without it being your fault—a bit like saying, "My phone ran out of battery." Someone can say, "It wasn't me. I got locked out. I had been doing it for too long." Is there any merit in exploring that further?

Duncan Stephenson: Yes. The snapchat streaks we talked about earlier are very clearly aimed at getting people hooked and constantly on their phones. The same is true of push notifications; I speak from experience. Anything that we can do to reduce the time has merit. Think of it in terms of body image, for example. If we get our self-esteem from a diverse range of influences and have a balanced attitude and outlook on life, it is better for our overall health and wellbeing. When people get sucked into social media too much, it can have a negative impact.

Dustin Hutchinson: The young people we spoke to talked about engaging with them in their world. They said that you could have engaging videos on social media raising awareness of the risks and problems. Although it sounds counterintuitive, if this was on social media, it could engage them and raise awareness of the risks.

Q61 **Stephen Metcalfe:** Funnily enough, what I wanted to talk about was the ability of social media to present varying, different images. It allows you to create an artificial profile or image of what your life is like, which can make it look far more glamorous and interesting than it might otherwise be. Potentially, that can have a detrimental effect on those who then see it, because they may feel, "Why is my life not as exciting as that?"

At the same time, people are able to enhance photos of themselves artificially. Celebrities curate their own profiles, so we create an artificial image of a world out there that does not actually exist. What effect does the idea that I am inadequate, but everyone else is perfect, have both on self-worth, or self-awareness, and on body image?

Duncan Stephenson: It is not just the image manipulation. Another thing we called for in our report was for all images that have been digitally retouched to be flagged. They have done the same in France, where all images that have been digitally manipulated now have to carry a health warning. That may be quite difficult to police, in hindsight; I do not know. But they have introduced it in France, so why not over here?

The other issue is the constant pressure to conform to an unrealistic and, often, unattainable body image ideal—one of lean muscularity, for men, and a slender ideal, for women. Apps such as Instagram perpetuate that, because they are very visual.

Matt Blow: I go back to the role of education. It is really important to teach young people that what you see on social media is not necessarily an accurate representation of the real world physically, in terms of body representation. We also think that social media companies can do more

to promote positive body confidence and body diversity. YoungMinds is signed up to the Be Real campaign for body confidence. If social media companies were to flag some of that through adverts and so on, it would be really helpful.

Q62 **Stephen Metcalfe:** Duncan, you said that it could be quite difficult to police, because, if you manipulated an image on your own platform and then uploaded it, it would be very difficult for the social media company to know that it had been amended. I get that point, but when you are applying filters that are part of a particular social media company's offering, surely that can be flagged up.

Duncan Stephenson: Yes. I do not see why not. When we met Facebook, it said, "All images these days are retouched, so the plan wouldn't work." We had similar issues when I worked in the body image field. Magazines and fashion editors said, "You can't show an airbrush-free logo on an image, because it has been digitally retouched. All of them are these days."

Q63 **Stephen Metcalfe:** Yes. However, having worked in the industry prior to being here, I know that there is a threshold. There is a difference between cleaning something up and digitally enhancing it. I do not know where you would draw the line, but there is a difference. It is a question of finding that. Does anyone else want to make a point on either of those issues?

Dustin Hutchinson: I just want to echo the point that I made earlier about how dangerous it is when children's and young people's self-worth and popularity are rooted in followers and likes, and that becomes as important to them as popularity in the non-online world.

Sue Jones: Just under half of young people do not believe that stuff that happens online is real life. That is quite shocking, I think. There is a lot of stress attached to that, because they cannot be away from their phones. They get stressed even if they are away from them for an hour. Those are nuanced mental health effects. We do not know what their long-term impact will be, but it is concerning that young people do not even think that that is real life. There needs to be a lot more education around that.

Q64 **Stephen Metcalfe:** Finally, we heard one case in which a young person had tried unsuccessfully to remove pictures of models from their social media feed, because they felt that they made them feel bad and conveyed the notion of what the perfect body image is. Do you think that more can be done to allow people to do that? Should social media companies take some responsibility for allowing you to filter what is in your feed?

Sue Jones: They brought that in on Instagram, so that you can filter the types of images you see. That has proved very popular with people. There are some people who are really happy to follow people whom they find inspirational. If it gets too much on their feed, they say, "I don't look

like that. That is not my life." There are some that do this. It is really useful.

Dustin Hutchinson: It is about empowering young people to engage in the online world in a way that maximises the benefits and mitigates the risks, and about techniques that can be put in place to enable them to have a positive experience online.

Q65 **Vicky Ford:** You have talked a bit about the role of schools. I want to try to drill down on what actions we should take. Has there been a strong enough debate about the role of schools? Do schools have clear enough guidance about the role that they should be playing?

Sue Jones: No. We are constantly asked about this by teachers. They need more help.

Q66 **Vicky Ford:** Should that come from the Department for Education? Should there be clearer guidance?

Sue Jones: The time needs to be there, because it is another stress for teachers.

Q67 **Vicky Ford:** Do you believe that social media should be used in the classroom, so that people can have that discussion there, or should children be encouraged to leave their phones at home and not to use them in the classroom? Are those two different questions?

Sue Jones: Overwhelmingly, we are told by teachers that, in the nicest possible way, they have given up trying to fight the use of phones in classrooms. They are now trying to integrate them within the lesson. You have the online polls that are happening in lessons. They are trying to bring in technology in that way, because otherwise they spend half the lesson trying to take phones off people.

Duncan Stephenson: In a separate campaign that we ran on obesity, we found that one in four young people had ordered fast food takeaways to their school from their mobile phones. Phones can be used for good; the issue is trying to graduate what features of a platform should be used by a person. We do not know.

Dustin Hutchinson: We believe that education in social media should be a timetabled part of the curriculum, whether it be in PSHE or in sex and relationships education. It should be a key component, timetabled and delivered by educators specifically trained to educate about the risks and the benefits.

Q68 **Vicky Ford:** Does everybody agree that the PSHE curriculum should include a section on social media?

Duncan Stephenson: Yes.

Q69 **Vicky Ford:** I hear you say that you want specialists—trained people—to deliver that part of the curriculum. However, I have also come across

modules that are sponsored by Google or Facebook, so the platforms themselves are taking control of the education. It seems to me that that is a potential conflict of interest. Do you share my concern? Is there more of a role for an organisation such as Internet Matters in providing that part of the curriculum?

Carolyn Bunting: We need to help teachers, who are best placed to deliver this kind of education, but what we hear is that they need more help. It needs to be integrated into their teacher training, and we need to have changes made to the curriculum. I know that we have the consultation on introducing online safety into RE and RSE and on making PSHE mandatory.

Those are the steps that we need to take. We should embed it within the curriculum. It is not going away. I do not think that it is necessarily right that we have lots of external organisations that will be difficult to control going into schools and trying to fix this problem. It feels like it is a fundamental piece of the curriculum, in making sure that children are able to deal with the digital world when they leave school.

Q70 **Vicky Ford:** You are saying that the element of PSHE that is digital literacy should be mandatory.

Sue Jones: I think that media and information literacy—digital literacy—should be mandatory in schools. As Carolyn said, it should be embedded, so that it is part of the curriculum, and developed on. You should always be referring back to it. It should be woven into the lessons.

Q71 **Vicky Ford:** That is slightly different from saying that all PSHE should be mandatory. That is possibly more controversial than saying that digital and media literacy should be mandatory.

This is my final question. Should that digital and media literacy learning also be delivered to parents? If so, should schools have a mandatory role to deliver it to parents?

Sue Jones: I think that there is a need for parents to be involved in it. Many teachers are already hugely overworked, so I am not sure that that is right for schools or who would be best placed to deliver it. There is definitely a need for it. Parents are terrified of the internet.

Carolyn Bunting: Overwhelmingly, parents are crying out for more help in this area. We need clearer, more succinct guidance and the equivalent of public service broadcasting. I do not know how we make that happen, but we need to motivate parents to get involved and to give them the right advice, so that they can help to support their children.

Dustin Hutchinson: Children said that they wanted their parents to know more about social media, so that they could have a discussion and a dialogue with them.

Vicky Ford: Yes—and not have dinosaurs like me.

Chair: On that note, I will bring in Neil.

Q72 **Neil O'Brien:** Will you give quick answers, if possible?

I want to finish Vicky's thought. If you are a teacher and you want to deliver good lessons on digital literacy, where are the resources to go to? What is the best thing—or is it not clear?

Sue Jones: It is not very clear. There is such a mix. It is everywhere, across the board. There is not one place. As you probably all know, having media and information literacy go into schools came to a staggering halt in about 2014, so teachers are scurrying around everywhere to try to get it from the best possible places.

Q73 **Neil O'Brien:** That is very helpful. We have talked about schools. What responsibility do the social media companies themselves have? Are they doing enough? What are the more positive things that are being done at the moment? Which of the big companies has done anything useful?

Sue Jones: The trusted flagger programme is really good. It should be extended to many more trusted organisations.

Q74 **Neil O'Brien:** What is that?

Sue Jones: If a young person automatically reports content online, it goes into a big pool of reporting that people are struggling to get through on the platforms. Organisations are able to check the content and can then say on a separate channel directly to Facebook, for example, "You need to remove this. We have checked it. We have found that it is offensive or harassing," or whatever it is. The company removes it, based on that. That is really helpful. There should be more of that for organisations.

Q75 **Neil O'Brien:** Which firms have done that?

Sue Jones: Facebook, Instagram and Google.

Q76 **Neil O'Brien:** Very good. Is there anything else that can usefully be done and that is good?

Matt Blow: A lot of the larger social media platforms will have some initiatives. One big thing is that there does not seem to be very well-published evaluation of them, so it is quite hard to know how effective they have been. That ties into the lack of transparency reporting. They should put things in context and say how many people they have reached. I know that Snapchat and Facebook have worked with the royal taskforce on cyber-bullying to signpost Childline when people report bullying. I know that there has not yet been a published evaluation of that, but we would be interested to see it.

Carolyn Bunting: Default settings for young people should be to private. I know that Facebook has made that move already, but it should happen across all social media. There is no reason why a 13 or 14-year-old needs to have an open public profile on social media.

Dustin Hutchinson: There should be an improvement in reporting mechanisms, so that young people can have confidence in those mechanisms. As we mentioned earlier, there should be feedback to young people about what has happened as a result, so that they can feel secure.

Duncan Stephenson: Engaging with the social media companies is really important. I want to flag that it is also important to engage with the device manufacturers, because there might be some buck-passing. People might say, "Oh, it is not our responsibility."

Q77 **Neil O'Brien:** Can you give me an example of that?

Duncan Stephenson: When we met a social media platform, it told us that things like the pop-up warning would be not its responsibility but the device manufacturer's responsibility.

Q78 **Neil O'Brien:** That is a good point.

When harmful content is reported, is it removed quickly enough? Can we see public data about how the different companies are performing? Is it going quickly enough, and how can we make it go quicker?

Sue Jones: Young people tell us all the time that it is not removed quickly enough. We have found that from our experience of working with them. Until we have got involved, they have been trying for weeks and months, sometimes, to get content removed. If you are a trusted flagger, you can get it removed within a couple of hours. There is a huge difference. Unless they know about that system and can get to an organisation that can do that, they do not have the access to it.

Q79 **Neil O'Brien:** Can you give us a very quick example? You said that some people have bad things happen and they are not removed quickly enough. What sorts of things do you mean?

Sue Jones: We were working with a young woman who was at university. She was based in the UK. Somebody in Russia, I think, was setting up profiles apparently in her name and attaching really extreme, obscene pornography to her, as if it were her feed. They were doctoring photographs, and other people were finding them and letting her know. She reported them, but they stayed up for months.

Q80 **Neil O'Brien:** Do you mind my asking which company was involved? How long was it between the report and the clean-up?

Sue Jones: It was Facebook. She had been reporting it for four to six months, but they remained up.

Q81 **Chair:** Is that recent?

Sue Jones: It was this year. One or two would come down, but more would go up. They know what the IP addresses are, so they can block them. She reported it to us, we went through the trusted flagger scheme, and every platform was down within an hour.

Q82 **Neil O'Brien:** That is very interesting. Does anyone else want to comment on the speed at which things are sorted out? If not, that is fine.

In 2017, Tumblr launched a "safe mode," which filters out sensitive content from appearing on your dashboard. Is that the answer for other platforms? Should all companies have a "safe mode" feature?

Matt Blow: There is something in that. We support the age-appropriate design code that is in the Data Protection Bill. There is something about recognising that children are not children online and making sure that communication around rights, responsibilities and everything like that is age appropriate. That is quite important.

Q83 **Neil O'Brien:** I have a bigger, more sweeping question. A report by the Children's Society accused social media companies of "marking their own homework" through self-regulation. Has self-regulation failed? I would be interested to hear your take on that.

Sue Jones: That one is a bit of a mixed bag.

Carolyn Bunting: I think that they need to do more. We welcome the call for transparency reporting. If you do not measure stuff, you cannot possibly manage this. The very first step in this is to get to grips with what is actually going on for UK children on social media. Once we see that, we can take a view on whether self-regulation is or is not working. In the absence of evidence, it is difficult to say whether it is. Anecdotally, one feels that it is not, because there are lots of low experiences.

Q84 **Neil O'Brien:** You mean things like reporting take-down times and average wait times.

Carolyn Bunting: Yes.

Duncan Stephenson: There seems to be a lack of consistency in how different platforms are approaching and embracing this. A standardised national code of practice might be the way to go.

Dustin Hutchinson: The NSPCC has called for a mandatory code of safety, backed up by an independent regulator. We would support that.

Neil O'Brien: That is good. Thank you very much.

Q85 **Chair:** I can see the great value of the trusted flagger scheme. Do Facebook and others like it fund that?

Sue Jones: Yes. It is their own system.

Q86 **Chair:** So they provide funding to charities in order to—

Sue Jones: No. They provide the service. It is on their platform. It is just that they give you access to quicker reporting mechanisms.

Chair: But you and other charities—

Sue Jones: We do not pay for it.

Chair: But you are doing it. You are contributing to their maintaining safety.

Sue Jones: Yes.

Chair: They do not provide you with any funding to support that work.

Sue Jones: No.

Q87 **Chair:** Should they?

Sue Jones: There is an element of that to it.

Chair: Given that direct complaints do not appear to get any response, it is quite valuable to them to have you and others—

Vicky Ford: Some do.

Q88 **Chair:** Okay, but we heard the evidence of one girl waiting months for any response. Should there be funding from the industry to organisations?

Sue Jones: I think so. That is reasonable, if you are a trusted flagger and, to a degree, you are doing some of their work for them. As a charity, we support over a million young people every year. For us, it is a valuable service, because we can reduce their stress and anxiety. If funding was involved in that, it would be hugely helpful.

Neil O'Brien: Are there any restrictions on who can become a trusted flagger?

Sue Jones: Yes.

Q89 **Neil O'Brien:** Can a local authority or a school become a trusted flagger?

Sue Jones: You have to make an application. You have to be working with young people directly. There are rules around who can be a trusted flagger. They very much decide that.

Q90 **Chair:** They are rules set by Facebook.

Sue Jones: Yes—their own rules. If you say, "Can we become a trusted flagger?" they will look at what you do and what services you provide.

Q91 **Neil O'Brien:** Should we be expanding the number of people? Should schools have that ability?

Sue Jones: That is interesting. Initially, it was used widely by the revenge porn helpline, which was getting content removed very quickly. It was then expanded. YouTube also does it. Ultimately, there could be more. Whether it came through to—

Chair: It seems like a good system, but it is getting to only part of the problem at the moment.

Sue Jones: Yes.

Q92 **Chair:** It seems that, overall, there has been a revolution in the last 10 years in what confronts children as they grow up. We are now grappling to catch up by getting the evidence and getting the guidance out there. Is that a fair characterisation of what is happening out there?

Carolyn Bunting: The pace of change of technology is so great that it is hard for all of us to keep up and to have a really robust evidence base, because the technology moves on once again.

Chair: Thank you very much. We appreciate your time.

Examination of witnesses

Witnesses: Amy Orben, Dr Lucy Betts, Dr Mark Griffiths and Dr Andrew Przybylski.

Q93 **Chair:** Welcome. Good morning, all of you. First, may I apologise for the late start? We overran with the first panel. May I also say that at 11.30 there will be a one minute's silence? A bell will ring.

Dr Griffiths: That has just been postponed to 2.30 pm.

Q94 **Chair:** Thank you for that update. There will not be a one minute's silence at 11.30.

We have a panel of four. Will you make sure that your answers are succinct? Don't feel obliged to answer every question, if you do not feel you have anything to add to what others have already said. May we start with brief introductions?

Dr Przybylski: Hi. I am Professor Andy Przybylski. I am a psychologist and senior research fellow at the Oxford Internet Institute. I am trained as an experimental psychologist.

Amy Orben: I am Amy Orben. I am representing the British Psychological Society, but I am also at Oxford. I am a college lecturer at Queen's College, and I am finishing off my PhD. I sit in experimental psychology.

Dr Betts: Hello. I am Dr Lucy Betts. I am an associate professor at Nottingham Trent University. I am also a member of the Nottingham Centre for Children, Young People and Families.

Dr Griffiths: I am Dr Mark Griffiths. I am distinguished professor of behavioural addiction at Nottingham Trent University. I am the director of the international gaming research unit. I have been researching the area of behavioural addictions for 31 years.

Q95 **Chair:** Thank you very much. We began our first panel discussion by asking whether social media can be held responsible for causing or exacerbating mental health problems and so on. May I start by asking each of you to give your brief view on that?

Dr Przybylski: In short, no. At present, there is a pretty spotty evidence base. It is based largely on correlational data. There are a lot of opportunities to read our own biases into the data. There has not yet been a standard evidence map that could allow us to say for sure, or even tentatively, that there is a positive causal relationship between social media use among young people and their mental wellbeing.

Amy Orben: I am coming from pretty much the same perspective. I work mainly with the data, so I see it every day. Oftentimes, we do not find any effects. When we do find effects, they are extremely small. When we take the whole picture into account, they become vanishingly small. From the perspective that there has not been any really good-quality evidence, I do not see that that link can be said to be present.

Q96 **Chair:** We are saying that the considerable anxieties out there about social media use and so forth are unfounded in terms of evidence. Is that what you are telling us?

Amy Orben: When the brief came out from the Committee, you said that you wanted to separate understandable concerns from the hard evidence. That is key. There are understandable concerns. We know that they are understandable, in that this has been a massive change in society. If I were a parent, I would probably be concerned myself, but, as the people who work with the numbers every day, we do not see that transposed into the hard evidence the Committee is looking for.

Dr Betts: Although I agree and acknowledge that there may be a lack of strong causal relationships in this area, I think that it is important to recognise that there is some evidence to suggest an impact on young people's wellbeing.

Q97 **Chair:** Do you want to expand on that?

Dr Betts: We need to acknowledge and be mindful of how social media can shape and impact, not just in terms of benefits, but through some of the more negative aspects.

Q98 **Chair:** Thank you. Mark?

Dr Griffiths: I broadly agree with what has been said. What we have is a lot of what we call cross-sectional snapshot research, which is not longitudinal. I totally agree with Andrew that we cannot give causation. Having said that, in my area of social media addiction or problematic social media use, there is a lot of correlation between lots of different things, such as depression and anxiety—what you would consider to be mental health issues—and overuse of social media.

Q99 **Chair:** But we do not know which leads to the other.

Dr Griffiths: No. That is where we have to be clear. There is no good causal evidence. We have lots of correlational evidence. I would add that there have now been over 100 studies of Facebook addiction. Most of them have very poor-quality data. There are very few nationally

representative samples. There is almost nothing in terms of longitudinal research. However, I echo Lucy, in the sense that I am a parent myself. I have three "screenagers." *[Laughter.]* I am being serious. We have to separate out parents' legitimate concerns. I would say that all my children overuse screen media, but none of them—

Q100 **Chair:** Would you do anything about it?

Dr Griffiths: Oh, yes. I do not limit screen time. My balance is that, as long as my kids are doing their educational stuff, their physical education, their peer development and the chores that they need to do around the house, I have no concerns about what they do with their disposable leisure time after that.

I look at what I did when I was their age. I used to watch three or four hours of black-and-white TV, on three channels, every day. My kids do not watch TV. They will watch the odd YouTube video when they are sitting there doing their social media, gaming or what have you.

Every week I get emails from parents saying, "My kids are addicted to social media." When you dive into that, you realise that what they are actually saying is that they think that their kids are using social media too much, which is a completely different thing.

Q101 **Neil O'Brien:** I have a very quick question, which is really aimed at Mark. You said that there is a lot of poor evidence, which is all about correlation. Is there any longitudinal evidence that could give you causation? Is there a plan to get any longitudinal evidence? Within the correlational stuff, what is the gold standard that has a decent N and a decent sample?

Dr Griffiths: There are a number of questions there. For a start, in my specialist area, which is problematic social media use, I know of no longitudinal studies whatsoever.

Amy Orben: There are some in our area.

Dr Griffiths: Looking at which issues?

Amy Orben: There are three that I believe link social media use to wellbeing. They are probably nearing the gold standard, but they are good. There was one that looked at 11,000 UK children at five years old. It looked at how much TV they watched and how much they used touchscreens. It then looked again at seven years old. It looked at five different outcomes, including whether the children had conduct problems, whether they were hyperactive and whether they had emotional problems, after those two years. You can link both TV use and electronic games with the five outcomes.

I calculated that there were 30 possible statistical tests that you could do linking one of those with each of the five outcomes. The study found one significant link—watching TV a lot did increase conduct problems. It did

not find that electronic games made any difference or that television use made any difference to outcomes other than conduct problems.

Dr Przybylski: Let me build critically on this. When we talk about a correlation between social media use and something like wellbeing, it does not necessarily mean that A causes B or B causes A. In many cases, such as the paper Amy is talking about, A and B are actually both caused by X. We have factors such as being male or female, socioeconomic status, education of parents and geography—whether or not kids can get out to play. When those factors systematically vary or are fixed over time, we see that as predictive of both lots of screen time and, maybe, more mental health deficits.

Amy Orben: Often you can think about it in this way. If a child uses technology a lot, they may feel worse. That link may be there, but it could be caused by a factor way beyond those two factors. If you are from a disadvantaged background, you are probably going to use technology more. You are probably also going to feel worse. In our research, and in research that has properly controlled for these effects, the effects of technology use alone on wellbeing become vanishingly small. This is really difficult to do, and we are not yet ready to say that there are causal links. If you try to look at the bigger picture, the effects become smaller.

Dr Griffiths: Can I butt in? When Amy came in there, I was talking about social media addiction/problematic social media use, which you would never do in a five to seven-year-old population. I go back to my earlier answer. I know of no longitudinal studies that have looked at social media addiction and problematic social media use, particularly among teenagers and emerging adults. I do not disagree with anything that Amy has just said, but those studies are not looking specifically—

Q102 **Chair:** Is there a case for more longitudinal work on this, given the revolution that is happening before our eyes?

Dr Griffiths: Absolutely.

Amy Orben: Yes. We are currently doing some work there. Our hands are tied at the moment, because we do not have the evidence that is necessary to inform both the public and policy makers. What we need is for both funding bodies to look at this a bit more in the future, so that we can put in these important questions, as we know that a panic may arise in about five years' time. We should now be thinking, "What can we learn from this moment here, where we can't provide the evidence?" We should be putting in questions about virtual reality use now and funding that research, so that we are not always behind. We are always behind at the moment.

Q103 **Chair:** Is your conclusion from the lack of evidence of causation that we should relax more about this, or is it that, until we get the evidence, we should adopt a precautionary principle and apply clear guidance, as best

we can, to limit potential extreme use, for example, and content?

Dr Przybylski: Operating by the precautionary principle is generally a good idea, with some caveats. The first is that we should learn by example. There are parts of the world, such as China and South Korea, where they have taken statutory action to enact things like the shutdown law. In South Korea, under-16s cannot use the internet or play online games between midnight and 6 am. They ran their programme for six years before anyone bothered to check whether it worked. When they checked, they found no decrease in technology addiction, and the average South Korean slept for an average of two more minutes a night. This was a massive step, which had a regulatory burden associated with it, and nobody bothered to check whether it worked.

Taking steps based on a precautionary principle makes sense, but we need, first, to learn from other people's failures, and, secondly, to build in some form of sunset clause or evaluation so that, while we are playing catch-up, we know when a technology or intervention is and is not working. If it is not smart, it can have many unintended consequences.

Chair: And we should evaluate everything that we do as we go forward.

Dr Przybylski: Absolutely.

Q104 **Chair:** Lucy, your survey of mobile phone alerts found that 32% of them triggered users to feel ""upset, nervous, afraid or ashamed." What can be done to prevent social media from being used in this way?

Dr Betts: Yes, that study, which was part of the submission, was done by one of my colleagues. By using a tracker on participants' mobile phones, it looked to see how they felt in response to message notifications. The research showed, as you said, that 32% reported negative emotions—feeling "upset, nervous, afraid or ashamed"—when they got notifications that, typically, involved them not interacting with them. This was an example of just receiving or removing the message without engaging with them.

It is important to acknowledge that 68% of the states in that piece of work were also positive; that tended to be when participants were interacting with others—typing a message in response to that notification.

Q105 **Chair:** Are there any other comments, very briefly?

Amy Orben: A similar study, not a longitudinal study but one done in the States where they used experience sampling such as Lucy's, looked at what people were doing on social media. They found that, overall, there was not a lot of an effect but, if you partialled out passive use—if you are scrolling and not interacting at all—there was a small negative effect overall. So that seems to back that up, and it was published in quite a high-profile journal a couple of years ago.

Q106 **Chair:** Thank you. Parents of children have reported not being able to turn off social media for fear of missing out, as it is known, or not

keeping contact up to date as a result of being left out of friendship groups, and so on. Should we be concerned about that as a society, or is it overstating a concern?

Dr Griffiths: Andrew will tell you he has written papers on fear of missing out. I have talked about fear of missing out, although I did not call it that, going right back to the late 1990s and early 2000s, when I was doing research on online addiction more generally. The thing is that, when something becomes 24/7 and people are always online, you will get some people who feel that, when they are not online, they are missing out on something.

For most people, that is not going to be a problem at all. From the research that we and others have done, fear of missing out seems to be linked to problematic social media use. Those people who are having negative effects on their lives as a result of that over-use of social media report fear of missing out and what is called nomophobia—no mobile phobia. Those two things are intricately associated with problematic social media use. Obviously, it is also associated with the use of smartphones, because that is where most people are accessing social media.

For the record, I do not believe that people are any more addicted to smartphones and the internet than alcoholics are addicted to a bottle. What we are really talking about is the applications that you can do within these media. But Andrew is the expert on fear of missing out. It is an issue, but for some people it is not an issue in terms of problematic use—but we know from the very small minority that have problematic social media use that FOMO is a big issue for them.

Q107 **Chair:** Andrew, I think this is your moment.

Professor Przybylski: It is definitely a subjective state that people have, and it looks like people say that they feel this more than before different types of social media existed. From my perspective, as a psychologist and someone who is interested in health and wellbeing more broadly, the question is whether this is more than just a label. Does it really account for anything in terms of extra-variance in predicting negative outcomes? We just have not seen that yet.

Q108 **Chair:** There is no evidence yet.

Professor Przybylski: No. It may be a new kind of phenomenological sticker that we have put on our states, but, with respect to whether it has added to human suffering, we have not seen that.

Q109 **Chair:** Thank you. Quite a lot of evidence has been given to us about impacts on vulnerable groups—on people in care, perhaps, looked-after children and people with existing mental health problems. Is there any evidence of a particular impact on such groups of social media use?

Amy Orben: I refer to a colleague of mine up in Edinburgh, Sue Fletcher-Watson, who does a lot of work looking at disadvantaged groups, not just the negative but the positive effects. She feels that is really under-represented—the amount of benefit that has been derived for people with disabilities and autism, and in getting children involved. Often, we focus on the negatives, but we also need to focus on the positives. That just came to my mind, and I thought that we should let her voice be heard as well. She would be very passionate about that.

Professor Przybylski: To echo and extend that, there is definitely, especially with online games, a destigmatising effect, especially for people with different forms of disability who might be left out. A number of charities are operating that help people with disabilities to access games, when they cannot necessarily hold and use a controller. That has been quite positive.

On the darker part of your question, we do not really know. There has been a good amount of work done on digital exclusion, on people who do not have access to a computer and the internet outside of school. But it is very difficult to do good research with those populations, so it is a very expensive question to answer.

Dr Griffiths: There are vulnerable groups, and the younger you are the more vulnerable. Those who have mental health issues, as Andrew says, are using things like gaming and social media. I have written three reviews on the positive effects of video games, for instance. For someone who is autistic or has bipolar disorder, various studies show that gaming and using social media can have a really positive effect.

What I am always talking about is the very small minority where over-use seems to have these associations with particular vulnerable groups, such as those with high anxiety or depression. They are more likely to seek out these things, because it makes them feel psychologically stable. For most people, that is going to be life enhancing and life affirming, but there will be a small minority where it actually just keeps people in that cycle.

Q110 **Chair:** To go back to our discussion about Mark's parenting responsibilities, do parents need guidance? We have heard lots of people commenting that parents feel in the dark—they panic, and they do not know what they should be doing. Is there a case for Government or anyone else to provide clear guidance about what parents should be doing?

Professor Przybylski: I think that they need good guidance. For about the last 25 years, the American Academy of Pediatrics has had what is called the two-by-two rule—so no screen time for those under two and no more than two hours for those who are older. That was the law of the land until October 2016, at which point they just decided to discard it. So now we have zombie professional advice. If you go on the Australian Health Ministry website or the US Health and Human Services website,

you still see the two-by-two rule, and you still see parents struggling with it, but the original creators of the rule have abandoned it.

We have pretty good research from parents showing that more than 60% of them try and fail at implementing the two-by-two rule. You have all these well-meaning parents, myself included, dying on this hill, and they do not know why. If there is to be guidance, it has to be consistent, evidence-based and offered in a way that is accessible and useful.

Chair: Evidence-based in a field where there is a shortage of evidence.

Professor Przybylski: Yes.

Q111 **Chair:** So, to go back to the precautionary principle point, we have presumably to work on the basis of legitimate concern sometimes, rather than solid evidence. Is that right?

Professor Przybylski: That is where the precautionary principle metaphor breaks down, because the principle is really designed for things that follow the trends that have a property—a chemical that has an effect on everyone, for example. This really speaks to the fact that we do not talk about food time or paper time; we talk about nutrition and reading. We are treating social media and digital screens as if they are one object, so the premise of the question is a bit strained.

Dr Griffiths: Can I just butt in? The two-by-two rule came out in 1999, when internet use and screen use was hardly around anyway. Any parent will know that the idea of your 13-year-old being limited to only two hours a day of screen time is absolutely impossible; it is not workable, and the issue is not about screen time whatever. It is about the content and context of that screen time.

As a responsible parent, you want your kids to do well educationally and to have a good physical time. There is a technological generation gap between some parents and children. You have some parents, like me, who use social media every day, and you have other parents who do not use it at all. What parents do there—and this happens every week when I get emails—is that they pathologise what is normal behaviour for a typical 13, 14 or 15-year-old.

A lot of parents just say that anything that is for three or four hours a day must be having a severe impact on my child's education or their physical education. I can tell you now that my youngest son—he may be watching this now, although I would hope not—is massively into sport and has lots and lots of friends, but has at least three or four hours every day of screen time. It does not interfere with his education or physical education. There is plenty of time for children to do that, particularly if they are not watching television, which is what we used to do.

The screen time issue is very difficult. There is not a magic number. There are common-sense guidelines. Would I advise parents to let their children play or interact on social media for eight hours a day? No—but

where is the balance between what is normal and what is acceptable? I would say that most screen time is now three or four hours a day. That is normal, without necessarily having any negative impact at all. If children get up to six, seven or eight hours a day, it will probably impact on their education, their physical education and their peer development. I do not think that there is a magic number, but I agree with Andrew that the two-by-two rule is absolutely unworkable.

Q112 **Chair:** Thank you. Very briefly, Amy, and then Carol.

Amy Orben: I think that we need to promote active engagement with technology use. That is something that not just we in the UK are propagating but also scientists in Germany. If you scare parents too much, you have a self-fulfilling prophecy so that, when something goes wrong in their children's online life, the children feel that they cannot talk to their parents. That is when the really negative things start to happen. So, if we can open up that conversation and keep that conversation open, that is the key thing that we need to promote.

Q113 **Carol Monaghan:** To come back to what you have just said, I know that my 19-year-old son does three to four hours of screen time. My eight-year-old and 10-year-old are not on social media, but they are on the internet and watch the television, and it impacts their behaviour. If they have been out playing in the garden, it is a totally different child who comes in to the child who has been sitting in front of the television or the screen. You have been looking at teenagers, but have you been looking at younger children and the impact on their behaviour?

Dr Griffiths: Most of my personal research has been on children from 10 years old right up to emerging adulthood, into their early 20s. With very young children, I think that Amy was talking about some of the work that has been done. In terms of vulnerability, the younger you are, the more likely it is that things like excessive screen time are going to have an impact. I certainly would not advocate to parents that a typical five-year-old should have more than four hours a day in front of a screen. But there is no scientific evidence to say that that should not happen. This is where I am wearing the hat whereby I am, I hope, what is considered to be a responsible parent, versus what we know scientifically and empirically.

Professor Przybylski: In terms of good, large-scale data, it is a really hard thing to study. Most of what we know about it comes from asking a parent how much screen time they think their child has. It is almost like hearsay in trying to build a statistical model. Thinking about it as a dose of a drug at that age is probably not the best way to think about it in terms of study.

Amy Orben: It is completely different.

Professor Przybylski: Amy, please disagree.

Amy Orben: No, no—there is that measurement problem as well, but I wanted to say something different. There was a study by quite a prominent developmental psychologist in 2014, who found that the use of touchscreens in young children did not have an impact on developmental milestones. That does not mean that, on the small scale, there are no changes, but if you are working with large-scale data, if you zoom out on the population level, that is where we cannot see the effects.

Q114 **Carol Monaghan:** Have any studies been done that look at young children? I am talking generally about TV, iPads and the internet—whatever. Is there anything that looks at the impact of younger children spending hour on hour doing those activities rather than more active activities?

Amy Orben: There is the study that I mentioned earlier, which is about five-year-olds. That is the main one that came out of a big Government initiative and the millennium cohort study.

Q115 **Carol Monaghan:** But that was just looking at touchscreens.

Amy Orben: That was looking at electronic games and television. There is currently no other millennium cohort study running to look at those longitudinal effects.

Professor Przybylski: CLOSER has proposed the follow-up study to the millennium cohort study, so you could have an answer in seven years.

Q116 **Neil O'Brien:** Children were born in about 2000 for the millennium cohort study, so, when they were being asked about their screen use and social media use, that was in 2005?

Amy Orben: They are still being asked now, so we are analysing the data at the moment and combining it with US data. Some really interesting work is being done.

Q117 **Neil O'Brien:** So, some of that study was done before the take-off of social media.

Amy Orben: But now we have that valuable resource that we are analysing about 15-year-olds, from 2015. Those data have been released, and again we see that the overall correlation is very small—about 1%. From knowing a child's technology use, you can predict about 1% of their wellbeing. If you put in the proper controls, it goes below that margin, which is where we say that it is almost too small to talk about.

I was in Cambridge yesterday telling people about the work we do around this 1% mark. Social psychologists laugh at you. They say, "Why are you studying this?" We say, "Well, we're having this whole public debate about it," but actually the effects are tiny.

Q118 **Carol Monaghan:** Should social media have age restrictions? If so, what age should it be?

Dr Griffiths: Obviously, we have had this 13 years age restriction. I can tell you now that, when my son was 11, he was the only one in his class not on social media. My partner took a decision and, for him not to be socially ostracised, we let him go on Facebook. Anything to do with age can be circumvented. For me, it is more about educating parents and children about the positive and negative effects of social media. It is very hard. Personally, I would like to see it restricted at 13, but now kids are tech-savvy at five, six or seven years of age. There is stuff on social media that is very good for children.

Coming up with a magic number of what the age should be is a bit like deciding on the ages for video gaming or watching certain films. Some parents know their kids better. If you are asking me whether I have ever let my 17-year-old watch an 18-certificate film, the answer is yes—I have. I believe that my child is mature enough to do that. On the other hand, I have not let my children at the age of 12 or 13 play an 18-certificate video game.

I think that parents know their own children best. Coming up with a number backed by what empirical evidence says is very hard, but I think that 13 is reasonable. It is very hard, particularly when you have 10 or 11-year-olds who are actively engaged in social media use.

Q119 **Chair:** Lucy and Andy, may I encourage you to keep your answers as succinct as possible, because of the time we have left?

Dr Betts: I would echo Mark's point. What is more important to consider is how we support and educate young people to use digital technology responsibly, because they are going to come into contact with this. The education side is more important.

Professor Przybylski: Check out some of the work done by Baroness Beeban Kidron and the 5Rights framework. A lot of work has gone in on the part of psychologists like us and also developmental psychologists. That is a really good place to start about making sure that the technology is well fitted to a child's developmental standpoint. Fundamentally, a lot of that is unknowable at this point, because there is an asymmetry between what academics know about these things and what the social media companies know with their data.

Q120 **Carol Monaghan:** We have been told that 46% of young people have stumbled across pornography accidentally. Should social media companies be doing more to prevent that? Do you support the plans to use last year's Digital Economy Act to force age verification on pornographic websites?

Dr Griffiths: My view is yes. My main area is gambling addiction. I believe that, when consumptive use leads to a potential problem in some way, companies have a duty of care to intervene. I work with huge datasets now. When we have 1 million online gamblers, we can see what people are doing. The social media companies have that data and,

therefore, I think they should be regulated to use that data to help in those cases.

Professor Przybylski: It is really important that we as a society take the decision that we want to protect young people from exposure to that kind of material. We have a duty to ensure that it works. I mean that in two ways—first, to ensure that there is no under-blocking, so people do not have access to the kind of material that we do not want them to see, making sure verifiably that that 46% number goes down after we spend all that time and money.

Secondly, we must take over-blocking very seriously. Young people have a right to information, especially around sexual health and areas where they might be ostracised and cannot ask their peers, and we want them to behave in a healthy way. A lot of these technologies might prevent them from accessing critical information. So it is not as easy as taking the tool off the shelf.

Q121 **Carol Monaghan:** Is age verification even feasible, or will young people always find a way around it?

Professor Przybylski: I have joked to some of your colleagues that age verification is the most amazing IT education strategy that I have seen the Government employ. If you put age verification between a young person and sex, it will teach them skills they never knew they had.

Dr Griffiths: True.

Professor Przybylski: It will teach them how to use proxies, VPN and other technologies. My legitimate concern, besides the IT training, is that many young people will wind up using insecure services to access mature material. They will wind up having viruses or other material infect the browser, so when the parent comes along at a later point in time—

Q122 **Chair:** What is your conclusion to all of this? Do we try?

Professor Przybylski: I think that the decision has been taken to try. I do not know whether it is technically feasible. I have colleagues at OII who have looked into it. I am not optimistic that it will work.

Q123 **Carol Monaghan:** What about using a credit card?

Professor Przybylski: If you wanted to build an amazing blackmail database of people's sexual interests, yes, you could use a credit card. In the Korean example, they tried exactly that with the shut-down law, and we found that young people were taking their parents' ID cards and impersonating them so that they could play more World of Warcraft—and World of Warcraft is much less interesting than sex.

Dr Griffiths: To go back to my main area of gambling, in Sweden and Norway, for instance, you have to be 18 to access gambling websites, and they do that by using the social security number. There is always a small proportion of kids who will use their parents' social security

number, and you cannot legislate for that. But it is actually much harder in other countries. They have what are called player cards, whereby every bit of gambling is tracked and you cannot do anything without the player card.

Q124 **Chair:** Is there evidence that it works in Norway and Sweden? Is there evidence that it has resulted in a reduced problem?

Dr Griffiths: Yes, in Sweden and Norway—but that is Sweden and Norway. Of course, here we are totally against national ID cards. In countries where there are ID cards, they are often linked to those particular things, which does actually reduce the number of adolescents who can get on to these services in the first place. But sex and gambling are things that are out there, and children have access to them.

Q125 **Neil O'Brien:** Is it just Norway and Sweden that have these player cards?

Dr Griffiths: Just those two at the moment. Some Canadian provinces have considered it, and New Zealand and Australia are considering it as well.

Amy Orben: As the only digital native on the panel, I think that we really need to think about these things. From a personal perspective, I think that there needs to be some serious cost-benefit analysis involved in doing those things. I know from personal experience that IT training gets very good if you want to get to something or get access. We had blocks in school on certain websites that were not even that bad, and the amount of work that went into getting around those blocks was incredible.

Chair: A learning experience, perhaps.

Amy Orben: Yes. I just wanted to flag that. In academia and in policy, the generation that already has used social media from when we were 13 is not represented in the debate as much. I think that we would probably stand strong that a real cost-benefit needs to be done properly before these huge things are implemented.

Q126 **Vicky Ford:** I have a set of questions on cyber-bullying. Andy mentioned the social media aspects of multi-player games and the interaction in them. A lot of our discussions on social media have been about traditional Instagram, Snapchat and Facebook-type actions, but some of the speakers here have been much more careful in talking about digital technology more broadly, because of the social media aspects of playing those games, which is what I see with my "screenagers."

Is it possible to say whether social media has made cyber-bullying worse, or is it just a vehicle for bullying that would have happened anyway?

Professor Przybylski: With a colleague, Lucy Bowes, also in experimental psychology, we published a paper in *The Lancet Child & Adolescent Health* last year. We looked at a sample of over 100,000

English 15-year-olds—one in five English 15-year-olds—and we found that nearly one third had reported some form of serious face-to-face bullying in the last six months, which is the traditional concern. We found that only about 4% said that they had been seriously bullied online, and nine out of 10 of that 4% were also bullied face to face. So there is really only a very small share of young people who are only bullied online, at least when we are talking about English 15-year-olds. It is not necessarily that somebody who is victimising people finds new victims via social media, the internet or games—or games-streaming websites, which is going to be a new moral panic, I promise. We are finding that those who are being victimised are being victimised across the wider gamut of outlets.

Q127 **Vicky Ford:** Do you all agree?

Amy Orben: In the data that we analyse together, we can look at the prevalence of cyber-bullying over time, and for us it has been remarkably flat.

Q128 **Vicky Ford:** But where it occurs, is it different from its offline counterpart? Is it more vehement, as it were, where it occurs?

Professor Przybylski: To go back to Amy's earlier point about 1% versus whatever, if you imagine a Venn diagram, where one circle is the amount of variability in bullying and the other circle is the amount of variability in wellbeing, with traditional face-to-face bullying there is a 10% or 15% overlap, so being bullied can really dent your wellbeing. When it comes to online bullying, that number is about 0.5%. With those who are bullied online and bullied face-to-face, it looks worse than those who are bullied only face to face, but the additional bit is actually rather small.

Dr Betts: I am going to give a slightly different perspective, drawing on some of my own work. Some of the research we have done with teachers and young people suggests that it is not necessarily the content of the message through cyber-bullying that can be problematic—it is the fear that that message can arrive at any time, which is different from face-to-face bullying in a school setting, when the individuals would know that potentially it is going to end with school. With cyber-bullying, incidents can occur at any point during that 24-hour cycle.

Q129 **Vicky Ford:** We heard in the earlier panel about cyber-bullying being always with you, and that people looking back at content makes it feel more aggressive. Do you agree?

Dr Betts: Linking into that, there is also the case that sometimes young people do not know who is posting that message about them, which may cause them to be suspicious of their peer network, because it could be somebody from their friendship group who is sending those hurtful messages to them.

Q130 **Vicky Ford:** We heard from the previous panel about challenges that

individuals have had in getting those messages removed from the internet. Do you agree that that is a challenge?

Dr Griffiths: Yes, it is a challenge. May I raise a few points? I am not a cyber-bullying expert; I have done only four or five studies on cyber-bullying. But from one that we published about three months ago, which was on a nationally representative sample of over 6,000 children, what was interesting was that the levels of cyber-bullying and bullying were actually fairly equal, at around 15%. You ask kids whether they have been cyber-bullied and they say no, but then you ask, for instance, "Have you had insulting online messages?" The study said that 16% said that they had had insulting online messages and 11% said that they had had embarrassing pictures of themselves sent, which may have been sexual or may have had nothing whatever to do with sex. So, kids themselves, if you ask them whether they have been cyber-bullied, may not actually perceive it as cyber-bullying per se; they might perceive it as something different.

But I totally agree with the point that, if you are cyber-bullied, it tends to have more psychological effects on the person, because of the reliving of that experience. That picture may still be out there. It is very different from being attacked in a playground, which perhaps nobody else sees, and being attacked online, which everybody in your class and your peer group sees. That is a totally different psychological experience.

Professor Przybylski: Something really curious has happened with researchers who study victimisation. For the last 50 years, researchers have really looked into human aggression among children, mainly, which has been an established line of work. Only since the late 1990s have researchers begun studying cyber-bullying, and many of them reinvent the wheel and do not pay attention to that whole other literature.

The consistency of bullying is very important. A one-off bullying experience, with some exceptions, no matter how bad it is does not really impact a child permanently. Bullying researchers have found that, if it happens more than two or three times a month, that is when you really start to get kids suffering, and those kids look different weeks, months or years later. So, it is really important not to just ask somebody if they were bullied or how it felt; you have to ask them about the frequency, or how severe it is, because that is what we know is linked to psychopathology and functioning problems later. It is like the difference between FOMO and depression: one thing feels bad, is in a little space and is part of growing and building resilience, and the other thing relates to something that is an actual concern.

Q131 **Vicky Ford:** With some apps, such as Snapchat, after the message is posted and read it disappears. Does that contribute to bullying or does it help to remove the bullying, because you know that it is not there forever, or is it important that the media platform has the ability to track the information so that it can do something about it?

Dr Griffiths: Personally, I feel that that information should be kept by the provider. If people come back legally and say that their lives were ruined by a particular event, you want the evidence base to be there. I have not done any research on Snapchat, and I have only one thing to say about it, which is that the streak system means that people spend enormous amounts of time on and over-use that particular platform. In relation to cyber-bullying, I think that that information should be kept.

Q132 **Vicky Ford:** Amy, what is your view?

Amy Orben: I think that it is a slippery slope. We do not keep a record of every single conversation just so that, when there is a legal battle, we have a record of a conversation. This is the problem with screen time as a whole. It is so diverse that one platform can have a really positive effect on somebody and a really negative effect on somebody else, which is part of that design.

I am not a lawyer, and I am not going to give advice on whether we should be keeping photographs, jurisdiction-wise, but I know that people use the platform because it is so transient. I do not know whether we should impose restrictions on that. It is all about diversity. That is a problem with screen time, and when we single out certain platforms, as some research reports have done, saying, "This platform has X effect and this platform has Y effect." You can use each platform incredibly differently; it depends on the motivation of the person.

Q133 **Vicky Ford:** The previous panel described in the research that they had done with young people 70% of them saying that they would like to have pop-up warnings when they have had a certain amount of screen time. We talked about the need for more research into that and, potentially, having automatic lockouts so that, after you have used the screen for a certain time, you are locked out for an automatic break. Do you think that it is worth doing more research in those areas?

Professor Przybylski: It really depends on the domain, to build on your question and Amy's point. Nintendo, with its new switch console, has done a very good job of providing parents with the levers required to, at the worst, lock a kid out, but also to provide feedback on use. It is really about providing structure that parents and socialisers can use. The answer is going to be platform dependent and needs an evidence base, and not just to be value driven or morally driven. We need to draw a line about why we are making the rules. Does that make sense?

Dr Griffiths: I do a lot of work on responsible gambling tools, and a lot can be done for responsible social media tools—for instance, pop-ups, personalised messaging and temporary self-exclusions, which have been shown to work on very big real datasets. There is no reason why they should not work on a social media platform as well.

Q134 **Chair:** Before I bring in Bill, I have a question about that small subset who use social media excessively, for long hours. Is a description of this

as addiction helpful or accurate? May I have any views from the panel on that?

Dr Griffiths: You are going to get totally opposite views from me and Andrew.

Chair: Okay; let us have them.

Dr Griffiths: I have spent 31 years studying behavioural addiction, and I have six criteria that I use to assess any addiction. If I found that, for a social media user, social media use was the most important thing in their lives and that they did it to the neglect of everything else, that it compromised their schoolwork, relationships and other hobbies, and if they got withdrawal symptoms if they could not engage in social media use and built up the amount of social media use over time—if they fulfil all those things—I would operationally define that person as being addicted to social media.

I get attacked from both sides. I will get attacked by Andrew, saying that we cannot use words such as "addiction" for things like social media. In my area of gambling, I would passionately argue that gambling has now been shown to be a genuine addiction in its most extreme form. If you accept that gambling can be an addiction, there is no theoretical reason why other behaviours cannot be addictive.

I also get attacked from those who passionately believe that social media addiction exists. Everyone says that I minimise the problem, because I think that it is in such a small minority of cases.

Q135 **Chair:** Thank you—we have heard your side. Andrew, give me your contrary view.

Professor Przybylski: Amy also has views. Honestly, I think that it trivialises the term addiction and provides a slippery slope to pathologising other parts of our lives—other things we enjoy. We could have Snapchat addiction, selfie addiction, sex addiction or chocolate ice cream addiction, if we used an arbitrary set of criteria.

These technologies have a positive side and a negative side. When we talk about addiction, we go all the way down that rabbit hole; we do not learn anything about the primary use of the technology. Psychologists, for a very long time, have not been studying addiction—or they have been, but they have been studying the idea of self-regulation, which is how you fit all the different demands on your time and resources together, with going to work, having a family or playing video games.

That science is pretty well worked out. So, I think that these technologies should be studied first and foremost as human pursuits, and then, if we really see human suffering akin to drug dependence, and we have good evidence for it, we should really worry. Until then, we risk stigmatising literally billions of people.

Amy Orben: I am not going to get involved in that part of the debate. Zooming out, we have seen the term "addiction" become incredibly common throughout the media about casual use, and that has become incredibly problematic. We are mixing up very different concepts of the clinical side and the side of, "Oh, I feel addicted to my smartphone."

That is very different, and we need to be very careful when we use certain terms. Screen time is not a chemical that goes into your brain and causes changes in the way our synapses fire. I am just saying that we need to be very cautious about what terminology we adopt.

Q136 **Bill Grant:** Thank you. As a Committee we have heard how unrealistic expectations are presented on social media, which can often cause low self-esteem in individuals. Is that a problem? If so, how big a problem is it? Are there any hard facts or research to suggest that it really is the case, or is it anecdotal?

Amy Orben: I am currently working on a project where we measure self-esteem on an Irish and UK dataset. There are 22 different tests that we could have done to look at links between technology use and self-esteem. We have found that two of those 22 effects are significantly negative and find that technology causes a decrease in self-esteem, that one test causes an increase in self-esteem in the UK data, and that 19 effects do not cause any change. On a general level, we do not see those effects, because it might be that some people have positive effects and some have negative effects.

The common narrative that it causes a huge decrease in self-esteem is not represented in our data. That is the only thing that I can say, and those are the numbers that I see every day.

Dr Griffiths: I have done dozens of studies looking at problematic social media and internet use and looking at things like self-esteem. In almost every one of those studies we find an association between that problematic use of those kinds of media and self-esteem, but in none of those papers do we say that social media causes it—they are associated with it.

It could be a chicken-and-egg thing and that people who have low self-esteem spend excessive time on the internet and social media platforms to overcome those self-esteem and low confidence problems.

Amy Orben: It might also be down to measurement. In the tests where we find negative effects, we ask people how much social media they think they use; then we ask them about their self-esteem. There, we find a negative effect. But then we also have different ways of measuring technology use. We have time-use diaries, in which children write down what they are doing every 10 minutes. If we use those as measures of technology use, we do not find those effects. I cannot give you a better answer.

Professor Przybylski: Negative stuff correlates with negative stuff when a kid fills out a survey. The question really needs to be, given that the evidence is not there and bad stuff correlates to bad stuff, whether we want it to be driven by our values or by the one result that Amy could have cynically picked out of the pile of 22 effects.

Amy Orben: I could now publish a research study saying that there is a positive effect, or two studies saying that there is a negative effect, or the 19 that say that there is no effect. What we are pioneering at Oxford is that we are running all possible analyses and trying to be as transparent as possible. This is really trying to push the field in one direction.

Q137 **Bill Grant:** Are we concluding that it is a perception rather than a reality? Would that be a fair comment?

Professor Przybylski: Well, no; there is a very good basis to be worried about this, but to this point we could make the data say anything that we want. Amy has 19 null results that say that there is no there there, but it is difficult to publish a paper that says that.

Dr Griffiths: We use things like the Rosenberg self-esteem scale, and we have done study after study on this. We typically find that people are more neurotic and introverted and have low self-esteem and self-confidence. As I say, it is an association; it does not say that this technology is causing it, but we found it in study after study, and we cannot change our data to make it look any different. People who score high on neuroticism score very low on self-esteem. We cannot manipulate those figures in any other way.

Q138 **Bill Grant:** Thank you. That leaves me looking in both directions.

Some people seem to enhance or embellish their social media profiles to court and attract likes or raise their profile on whatever platform. Does that present a risk that should be mitigated, or is it another perception?

Dr Griffiths: I have a view on this, but someone else can go first.

Dr Betts: There is a piece of research in the submission from us that looks at how university students change things and strategically upload to Instagram. They discussed how they picked a particular time of the day to make a post, because they thought it would be received differently by their peers. They talked about how they changed settings of images before they posted them—again, so they would be potentially received differently.

Q139 **Bill Grant:** At different times of the day.

Dr Betts: Yes.

Amy Orben: I used to organise a lot of things at university and would upload things at different times, because more people would see it around 3 pm than at 8 am. That is quite a common practice. Social media

sites use algorithms, and, if you get a lot of attention very quickly, it gets shown to more people. If you want to promote a talk from a certain person for a certain society, you are probably going to try to post it at the right time.

Q140 **Bill Grant:** On a wee supplementary point, could that one person evolve to be two people? Could that person who in reality is one person become the same person but different on social media? Can one person be two people?

Professor Przybylski: Well, yes—but let us look at the broader thing. We are very zeroed in on the social media aspect. If we pop over to Beeban Kidron's writing about children's lives, we find a bit more qualitative evidence. Childhood is happening here, and the same kid is trying on different hats and different aspects of their identity. When we take a snapshot as a researcher and collect correlational evidence, or even if we follow the same young person over time, we get a pretty impoverished view of what is going on. Ofcom collects some really interesting qualitative research from families with different socioeconomic status backgrounds.

Chair: May I make another plea to keep your answers short, as we are running out of time now?

Professor Przybylski: I am happy to provide links.

Q141 **Bill Grant:** These platforms carry manipulated images that have been adjusted, or digitally remastered, as one might say. France is adopting a policy whereby that would be mentioned on a platform. Should we go in that direction and tell people when an image that they are seeing has been altered or adjusted?

Dr Griffiths: It depends what it is. I have just done a study on what we call obsessive selfie-taking. Those who are obsessive selfie-takers are, in the most extreme cases, putting up 200 images of themselves inside a day and spending their time manipulating them. Obviously, you would not want your own children to spend all their time doing that.

Whether we should put a warning on the image, saying that it has been manipulated, is a different issue. For me, it is more about the fact that lots of people are spending lots of time manipulating their pictures to present a certain identity. But I agree with what was said before: all of us present identities in different places online.

Q142 **Chair:** Andy, very quickly.

Professor Przybylski: Sure, if you want to try it, try it, but measure it and have a clear idea about what you want to change. If it does not change it, let it sunset.

Amy Orben: It is also about where the barrier is. Putting filters on your photos is very common. What would merit a badge, and what would not,

would be very difficult to decide, because digital manipulation of images is incredibly commonplace, in that phones just do it now—images look better, so people just do it. I am not opposed to it or for it, but it would be difficult to know when the badge should be put on, or not.

Q143 **Neil O'Brien:** In keeping people safe online, what is the role of schools? What should be taught and what is taught? Is PSHE any good at the moment? Do teachers know where to look for advice? Should digital literacy be mandatory, and should we also involve the parents through schools in teaching them about how to keep their children safe from harms online? That is quite a broad range of things about the role of the school. Perhaps we can go to Mark first.

Dr Griffiths: First, I believe that digital literacy should be compulsory in schools. PSHE is used for lots of different things in lots of different schools, but that is probably the best platform and arena in which to do that. Parents have to be involved. I know that teachers in a number of schools in the Nottingham area put on events for parents about digital literacy, because teachers themselves are telling you that the use of smartphones and social media in classes is having a negative impact—or they perceive it to be having a negative impact. For me, it is an absolute yes. To nearly all the things that you suggested there, I would be saying yes, it should be done.

Q144 **Neil O'Brien:** May I ask one additional question? Are there any statistics about what practice is like in schools? Some schools say no to taking phones to school and some take the phone off you at the start of the day, while some say that you can have it in class but you cannot use it. Do we have statistics on that? Are there any studies of what good practice is in that field?

Dr Griffiths: I do not personally know of any studies that have looked at that. Even in Nottingham, I can tell you that schools have adopted all those approaches, with no phones or phones handed in.

Q145 **Neil O'Brien:** We have seen with adults that having a smartphone on them reduces their concentration level. I do not know whether that is a good study or not. I just add that to my pool of questions for the others.

Professor Przybylski: Jono Baggaley, who is newly in at PSHE, has in the last year been working on exactly this issue.

Q146 **Neil O'Brien:** Where is he, sorry?

Professor Przybylski: He is running the PSHE IT training curriculum development. It is early days. I know both Facebook and Google have their own community service projects. Google's is called Be Internet Awesome; I forget what Facebook's is called. So, both PSHE and industry actors are trying to do this, but I would say that the approach is entirely piecemeal at this point.

Q147 **Neil O'Brien:** Does anyone else have anything to add?

Amy Orben: The World Economic Forum has published five or six things that should be taught, ranging from good etiquette to safety and security. Privacy is a huge issue, and it is not just about wellbeing; there are some incredible issues around privacy and security, from which I feel this debate is taking away some well-merited attention.

Q148 **Neil O'Brien:** And there is no landmark course that I can go to as a teacher—no gold standard.

Amy Orben: No.

Professor Przybylski: The closest place you see this training being taken seriously is in Israel, where it is considered an industrial and military step that is needed to cultivate IT skills among the youth.

Q149 **Neil O'Brien:** Has it got a name?

Professor Przybylski: I can follow up with that. It is not an English name.

Dr Betts: It is important to include parents and guardians and broader adults in this education and awareness raising. As Amy was saying, technology is evolving and what parents are using may be very different from what young people are using. It needs to be across generations.

Q150 **Chair:** We are told that in France there is some sort of ban on devices in classrooms. There was a report in *The Guardian* of an LSE study that found that "in schools where mobiles were banned, the test scores of 16-year-olds improved by 6.4%." Do you know anything about that study? Do you think it has any credibility?

Dr Griffiths: I do not know of the study, but that finding would not surprise me because, obviously, any time when anybody is using something in the classroom, it is taking away time in that classroom.

Amy Orben: We need to look at confounding factors. A school that has the amount of facilities to enforce a ban probably has a more privileged stance, so we cannot really look at that as causation. I do not know the study. The LSE is a good outlet, but media reporting is very bad at the moment. We can definitely follow up on that and have a look.

Q151 **Chair:** Someone sitting at the back has put up her hand. Do you want to offer a view?

Catherine Sabben-Clare: I submitted that information about the survey on the online submissions section. It referred to 6.4% of the lowest socioeconomic group—not socioeconomically limited but academically limited. So, on the top quartile, it had hardly any impact at all.

Q152 **Chair:** So, lower achievers are more impacted by having devices.

Catherine Sabben-Clare: They are much more easily distracted by phones. That was a very important part of that.

Q153 **Darren Jones:** I am very conscious as a new parent about adults leading by example on this, and I dread to think how much time I spend on my watch, iPad, phone and laptop. We have only a few minutes left. I have three very short questions, which I shall ask in one go, so please answer the ones you would like to.

Do you feel that research funding is correctly geared to help us in this area? If not, how does that need to change? Do you think that the research methods that we use today are fit for purpose for this type of research? Thirdly, if you were asking for us to make recommendations on gaps that need to be prioritised to fill with new areas of research, what would those look like?

Amy Orben: With research methods, we have some incredible large-scale datasets. We need to pre-empt these panics, as I was saying before, and put in the questions earlier. That is the general rule. The datasets that have been made available are incredibly powerful but also incredibly dangerous if used wrongly. They have a lot of statistical power, which means that you can pick and choose what you report, as we were trying to allude to.

Professor Przybylski: There are three things here. *The British Medical Journal* has only one style rule, which is that you are not allowed to end a paper saying, "More research is needed." Actually, what is needed here is much better research, which means that it needs to be open, openly accessible and available, and it needs to be transparent—the data and the code need to be shared. Researchers need to say whether they had their hypotheses before they collected their data, or not.

Q154 **Chair:** That applies to all research, doesn't it?

Professor Przybylski: Yes, to all natural science and positivist research. But that does not happen in our field right now. Even when you talk about fancy things like meta-analysis, it is really garbage in, garbage out. What the research councils should be calling for is open and robust pre-registered research, because that is the only way in which we will figure out which is the thing to which we are supposed to pay attention. Should it be violent video games, social media or internet pornography? We have limited time and resources that we need to triage, and the only way we can do that is with open and robust evidence.

Q155 **Chair:** And you think there is a need for that.

Professor Przybylski: Yes.

Amy Orben: An incredible need. I use datasets that are openly available but not very accessible, and ones where the code and the data are openly available, and our work is so much easier. We can double-check what other people have done and add additional analyses, and the science then becomes collaborative. Moving UK-rooted funding and funding throughout towards a more open, pre-registered and accessible way does not only make science more collaborative and easier, getting us to what

science is supposed to be, but it also allows people to become involved from outside science as well. It would solve a lot of problems that we have at the moment.

Q156 **Darren Jones:** Which, given our recent inquiry on research integrity, is really very interesting.

Dr Griffiths: I do not disagree with anything that has just been said, so I shall not add to that. One thing that good-quality research relies on is good-quality data, usually carried on over a long period of time, which is very expensive.

We should learn from what is happening in other areas. I was the co-author of the last two British gambling prevalence surveys. One thing that we asked there—it was Tony Blair's idea; he had the phrase "polluter pays"—was that the industry put in large amounts of money. The British gambling prevalence survey, just for a cross-sectional piece of work, cost nearly £1 million.

I would ask social media operators to fund this type of research. Also, they should be opening up their datasets in the same way as the gambling industry is being asked to do now for academics to come in, because those are objective data. We want to know what is happening in terms of over-use and so on, and the data are there. Academics should have access to them.

Professor Przybylski: Building on that, in the Green Paper on the Digital Economy Bill there was the idea of a statutory levy. It is not very specific, but it could be on money or data.

Q157 **Chair:** You would support that as well, would you?

Professor Przybylski: Oh, yes.

Dr Griffiths: Me too.

Professor Przybylski: Fundamentally, there is an asymmetry. Even when individual researchers or small groups collaborate with Facebook, Google or gaming companies, they can often suppress results that are not positive, or they can help to promote results that help them to look good. That is the kind of data to which we do not have access as academics, so we have written a white paper on a framework that would engage industry directly in open, transparent and reproducible science. If these companies want to be seen as public utilities and as operating in the public good, we need to make them work for science.

Q158 **Chair:** Have you submitted your white paper?

Professor Przybylski: I will do it. Facebook is reading it right now.

Amy Orben: The key thing is that we cannot just grant access to these datasets to single researchers—it would be too powerful for a single research team. They have now been trialling things about working

collaboratively on projects, especially in psychological science, taking CERN as the gold standard for thinking of research questions that might be interesting for everyone, deciding collaboratively, pre-registering the method and then making all the data and codes open—and then the results come out.

Professor Przybylski: It will be published, no matter what it finds.

Amy Orben: If that happens, I will be glad to have stayed in science.

Q159 **Darren Jones:** It would be great to do that on a European basis, with FP9 and Horizon, as a collaborative research project. I am going to leave it there.

Chair: Thank you very much indeed. I appreciate your time, all of you. It was a very interesting discussion.