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Research for CULT Committee - Child safety online: definition of the problem

IN-DEPTH ANALYSIS

EN

2018

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This document was requested by the European Parliament's Committee on Culture and Education.

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LINGUISTIC VERSION

Original: EN

Please use the following reference to cite this study:
O'NEILL, B 2018, Research for CULT Committee – Child safety online: definition of the problem, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels
Please use the following reference for in-text citations:
O'Neill (2018)

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Abstract

This briefing paper addresses the definition and scope of children's online safety as a policy issue and process. The paper draws on evidence of risks that children may encounter in the course of their use of the Internet. This is one of three briefing papers requested by the CULT Committee to assist in its assessment of the requirements to ensure adequate support for protection of minors and children's wellbeing in the digital age.

CONTENTS

LIST OF ABBREVIATIONS

CoE	Council of Europe
COPPA	Children's Online Privacy Protection Act
CSEM	Child sexual exploitation material
CULT	Culture and Education Committee
EC	European Commission
EP	European Parliament
EU	European Union
ICTs	Information and Communication Technologies
P2P	Peer-to-peer technologies
UN	United Nations
VR	Virtual Reality Technologies

EXECUTIVE SUMMARY

Children's unprecedented access to and use of the Internet brings numerous benefits as well as risks, presenting a range of legal, regulatory and safeguarding challenges. Child online safety refers to the process of implementing policies and initiatives that seek to protect children when they access and use the Internet and is an important priority for governments everywhere. An important issue for policy makers is the need to strike the right balance between protecting children from harm while promoting their rights to participate fully in the Information Society. In European policy making, the shift in focus from a safer to a better Internet reflects a move from a protectionist stance towards a more participatory, rights-based approach.

Children engage in diverse online activities that may, depending on the circumstances, involve 'risky opportunities'. In this context, it is vital to remember that risks and opportunities go hand in hand and that risks do not inevitably lead to harm. The classification of online content, contact and conduct risks provides a useful framework to assess the available evidence and implications for online governance policy and child online safety. Given the rapid evolution in digital technologies, a robust Europe-wide evidence base is crucial for effective policy making. However, with the exception of EU Kids Online and Net Children Go Mobile, the availability of comparative European studies is limited with insufficient research on younger age groups, uses of diverse technologies and youth perspectives on online risks and benefits.

The growing evidence base shows that children encounter a range of risks in the course of their Internet use. Content risks for children are particularly pervasive. According to EU Kids Online, over half of 9-16 year-olds reported there were things online that made them 'uncomfortable, upset or feel they shouldn't have seen it'. Exposure to sexual images online is relatively common. However, not all who had seen sexual content were adversely affected by it. Contact risks including sexual harassment and the problematic sending and receiving of sexual messages have given rise to much public concern though the evidence for its incidence and impact is uneven. Cyberbullying is the contact risk that most adversely affects children and among the most common reasons for children contacting Insafe Helplines. Increased levels of online hate, abuse and extremist content online have also been reported. Risks arising from commercial communication by contrast are perceived to a lesser extent by parents and caregivers despite their frequent occurrence.

At the extreme end of the spectrum of risks that may impact children are forms of cybercrime targeting children. Online crimes affecting children incorporate a range of contact and conduct abuses that are both harmful and illegal and may include persistent harassment or stalking; grooming and sexual exploitation; radicalisation and extremist ideologies; as well as commercial exploitation or misuse/theft of personal data. Cybercrime targeting children as well as the majority of online sexual abuse of children is non-commercial in nature and in many instances of extortion or abuse, the perpetrators are known to victims. Europol, however, reports increased evidence of extortion activity being carried out by organised crime groups.

With ever increasing innovation in the technology sphere, children as experimental, early adopters frequently highlight emerging risks as well as unintended consequences of digital technologies and services. As children go online and use digital devices at ever-younger ages, new emerging challenges for their safety and for digital parenting emerge. The

Internet of Things, for example, poses challenges and risks for children both in terms of privacy and security of devices in the home whilst creating new issues arising from the incremental effects of data collection over extended periods of time.

1. BACKGROUND: CHILD SAFETY ONLINE

KEY FINDINGS

- **Children's unprecedented access and use to the Internet brings numerous benefits as well as risks, presenting a range of legal, regulatory and safeguarding challenges**.

- Child online safety has been identified as an important priority for governments and policy makers. It requires **striking the right balance between protecting children from harm while promoting their rights to participate fully in the Information Society**. The shift in policy focus from a *safer* to a *better* Internet reflects a move from a protectionist towards a participatory, rights-based approach.

- Given the rapid evolution in digital technologies, **a robust Europe-wide evidence base is crucial for effective policy making**. The availability of research studies remains uneven with insufficient research available for younger age groups, diverse technologies and youth perspectives and experiences of online risks and benefits.

Children's online safety, or the process to implement policies and initiatives that seek to protect children when they access and use the Internet, is a key topic in most Western societies, presenting many legal, regulatory and safeguarding challenges. The fact that children and young people make up a significant proportion of all Internet users and that they use technologies/services not specifically designed with children in mind, makes the topic even more pressing.

Information and communication technologies (ICTs) and Internet use benefit across all domains of modern life for adults and children alike. Children benefit through their online access to unprecedented opportunities for education, information, socialisation as well as entertainment and having fun. The Internet is a platform that affords children the possibility of overcoming other inequalities in their lives and enables them to exercise their rights as citizens. However, in the course of their Internet use, children it is recognised may encounter content and/or situations that expose them to risks that can adversely affect them, be harmful for their development or place them in danger. Ensuring child safety online is, therefore, a matter of striking the right balance between protecting children from harm while enabling them to participate fully in the Information Society as they go about their daily lives.

The purpose of this briefing paper is to provide an overview of the principal elements that contribute to the definition of child online safety with particular reference to evidence of risks potentially leading to harm that children may encounter in the course of their use of digital technologies and the Internet. This is one of three briefing papers requested by the CULT Committee to assist in its assessment of the requirements to ensure adequate support for protection of minors and children wellbeing in the digital age.

The paper is structured around three main areas:

1. Relevant evidence for perceived risks and harm as available in the research field, including evidence for sociological, psychological and commercial aspects of negative impacts on minors;

2. Identification of trends in online crimes affecting children with reference to relevant Europol data and assessments;

3. New technological developments and changes in business and society since the adoption of the last CULT Committee own-initiative report on protecting children in the digital world adopted in 2012.

Children's Internet has been much researched, particularly in recent years with studies concentrated in Europe and in the United States. However, with wide variation in how children's online experiences are conceptualised and researched, the overall evidence base remains uneven with varying levels of quality and comparability. As such, development of the evidence base for Internet safety policy making is itself one of the key strategies required to support actions and policy for children's online safety.

1.1. Defining the problem

To have every European digital, benefiting from the advantages that ICTs lend to all aspects of contemporary societies is central to the shared goals of the Digital Agenda for Europe[1]. For children to achieve this and assume 'their rightful place within the information society'[2] (European Commission 1996) requires recognition of their particular needs and vulnerabilities on the Internet, which, as argued in the European Commission Communication on *A European Strategy for a Better Internet for Children*, must be addressed specifically 'so that the Internet becomes a place of opportunities for children to access knowledge, to communicate' and 'to develop their skills' (European Commission 2012, p.3). Child online safety, alongside other relevant frameworks such as the EU Agenda for the Rights of the Child,[3] represents one of the main policy platforms within which these goals are addressed.

Child online safety may be said to refer to the full range of measures to support children's safety and well-being online encompassing *inter alia* awareness raising regarding online risks aimed at children, parents, carers and teachers; education to support greater digital literacy and skills in helping children to protect themselves; tools and technological solutions aimed at creating a safer online environment; regulatory measures to enhance stakeholder cooperation; and actions to tackle illegal content online. Beginning with the Safer Internet Programme[4] and subsequently with the European Strategy for a Better Internet for Children under the Connecting Europe facility,[5] EU policy making has over the course of two decades supported a combination of initiatives and stakeholder cooperation as the basis for supporting positive online experiences for children.

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[1] COM(2010) 245 final/2. *Digital Agenda for Europe* https://europa.eu/european-union/file/1497/download_en?token=KzfSz-CR

[2] As stated in the *Green Paper On The Protection Of Minors And Human Dignity In Audiovisual And Information Services* COM(96) 483 : "As well as being protected, children and young people must be given their rightful place within the information society. To achieve this, the following two aims must be achieved:
– to exploit the potential of the media to help educate tomorrow's citizens;
– to help tomorrow's citizens understand the media and use them responsibly." (Sec. 3.3.2 p.11)

[3] COM(2011) 60 final *An EU Agenda for the Rights of the Child.*

[4] *Action plan for a Safer Internet 1999-2004* based on Decision No 276/1999/EC of the European Parliament and of the Council of 25 January 1999 adopting a multiannual Community action plan on promoting safer use of the Internet by combating illegal and harmful content on global networks

[5] https://www.betterinternetforkids.eu

How society responds to the challenges posed by digital technologies to children's safety has evolved differently in various parts of the world, leading to contrasting approaches towards definition of the problem, with varying priorities and different solutions proposed (van der Hof et al. 2014; Savirimuthu 2012). Some of the ways in which child online safety has been framed, broadly following the successive phases of policy development particularly in high-income Western countries, may be summarised as follows:

a) As a matter primarily centred on protecting the child from online risks conceived as an extension to threats in the physical world, requiring governance measures based on restriction of access and mitigation of risk, as evidenced by *restrictive* or *protectionist* approaches;

b) As an expression of a balance between children's rights to protection from harm on the one hand and the provision of appropriate supports, content and opportunities suited to their age on the other, as evidenced in the shift in policy focus from a *safer* to a *better* Internet;

c) In the context of children's *participation* in the Information Society, where children's online safety is viewed as a necessary condition for their full and active participation and as an expression of their *digital citizenship*.

Over the course of some two decades of policy development related to children and the Internet, most attention has been concentrated on the first domain with a focus on inter-governmental, law enforcement and industry cooperation for the purposes of combatting the most serious threats and sources of harms affecting children. More recently, efforts to support better provision to match the embedded nature of the Internet in children's lives is apparent, as is consideration of the values of education for democratic culture through an emphasis on the quality of digital engagement and participation (Council of Europe 2016). To be effective, however, policy making requires a robust evidence base to keep pace with the changing technology environment, and to document children's actual experiences of risks and safety online (Livingstone, 2013). The evolving discourse on children's online safety is, therefore, one matched by an evolving research agenda and heightened awareness of the strengths, weakness and gaps in the knowledge base, without which policy is greatly undermined.

1.2. Children's online access, uses and activities

The heightened attention that children's online safety receives is without doubt underpinned by the extraordinary and unprecedented access they enjoy. Globally, 71% of young people, aged 15 to 24 years, are online compared with 48% of the total population (UNICEF 2017). Children under 18 years of age account for an estimated one in three Internet users around the world (Livingstone et al. 2015). Just as the Internet has become an integral feature of contemporary social and cultural life, so too has it become central to children's lives.

Europeans overall enjoy high levels of online connectivity. Access to the Internet at home has doubled from 42% of households in 2005 to over 84% in 2017 (ITU, 2017) with an estimated 80% of Europeans online. Young people are to the fore in terms on online access with some research suggesting that the numbers of children going online has reached a plateau.[6] For children who are online, *EU Kids Online* found in 2010 that of those children aged 9-16 years who go online, 60% used the Internet every day or almost every day.

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[6] Evidence from the UK suggests that Internet access may have reached a peak: a Childwise survey of 1,936 children aged 5-16 in Autumn 2016 found that 94% reported using the Internet at all, with 91% of 5- to 10-year-olds and 98% of 11- to 16-year-olds (in Livingstone, Davidson, et al. 2017, p.5).

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Between 2010 and 2014, the numbers of children using the Internet in their own room rose from half to two thirds of 9 to 16 year-olds (Livingstone et al. 2014).

Given such high levels of access, children's patterns of use are reflected in diverse play, leisure, communication and education-oriented activities. A hypothesised 'ladder of opportunities' points towards "a staged process with systematic difference between those who take up more and those who take up fewer opportunities" (Livingstone & Helsper 2007: 683). *EU Kids Online* found that nearly all children engage in basic Internet activities (going online for schoolwork, playing games online etc.). 75% of 9-16 year-olds go on to use the Internet more interactively as a communications tool (social networking, instant messaging, email) and reading/watching the news. However, fewer than a quarter attain the more advanced or creative online stages of Internet use, limiting the benefits and skills to be attained (Livingstone et al. 2011: 14).

Amongst the most popular online activities, children's social media use has shown the fastest growth. Social media bring together a variety of interactive, communicative and creative functions and practices and as such integrate online opportunities and risks more seamlessly than any other medium (Lenhart et al. 2011; Staksrud et al. 2012). The proliferation of social media use among children was captured in *EU Kids Online* data which showed the numbers of children, aged 9 to 16, with their own social networking profile increasing from 59% in 2010 to 68% in 2014. Age remains the key factor: while just one quarter of children aged 9-10 said they had a profile on a social media service, this percentage rises to 93% of older teenagers. One in four 9-10 year olds and over half of 11-12 year olds reported using social media – with 22% and 53% on Facebook respectively. One in four teens and six in ten 'under-age' (9-12 year-old) users also reported displaying an incorrect age on their social media profile (Barbovschi et al. 2015).

1.3. Availability of evidence

The European research agenda related to children's use of the Internet is one that has evolved from an early focus on risk and moral panics, followed by a period of conceptual clarification and evidence review, to a more systematic documentation and mapping that allows for a greater appreciation of children's engagement with the world as '*mediated* by the Internet' (Livingstone, Mascheroni, & Staksrud, 2017). The study of children's Internet use builds upon a well-established tradition of social science research into the role of media in children's lives more generally. However, despite the sustained attention over several decades to children's use of digital and Internet technologies, the evidence base remains uneven with many gaps in the availability of robust, high quality findings.

A database of European research studies created by *EU Kids Online*[7] charts the development of available evidence from an initial 150 studies in 2003 to over 1500 entries a decade later of European research on subjects of children and young people's online activities, risks and safety. However, despite the large volume and growing number of individual studies from countries across Europe, a number of weaknesses are apparent. Research tends to be concentrated in a small number of countries (e.g. Belgium, Germany and the UK). Given that only four in ten are published in or include a summary in English, their availability to international audiences is also limited (Ólafsson et al. 2014). More significantly, most studies are conducted at a single time point in one country, making it difficult to compare findings across countries and over time.

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[7]   Available at: http://www.lse.ac.uk/media@lse/research/EUKidsOnline/DB/home.aspx

There are also notable gaps in the themes covered by research. Most studies focus on teenagers, aged 13 years and over, to the exclusion of younger children, despite the rapid rise in their use of the Internet and mobile technologies. There are also gaps in the types of technology studied with fewer studies on mobile, convergent and emerging technologies. In addition, there are still gaps in the available research on children's exposure to online risk, how they respond and which children are most vulnerable to harm. Finally, and crucially, more information is needed about the opportunities and benefits that children derive from the Internet.

The limited availability of longitudinal and comparable findings at the European level is also noteworthy. It is now a decade since the last Eurobarometer surveys were undertaken of child online safety from the perspectives of European children (Eurobarometer 2007) or parents across Europe (Eurobarometer 2008). The *EU Kids Online* survey of 25,000 European 9-16 year old Internet users and their parents in 25 countries was undertaken in 2010 (Livingstone et al. 2011) and remains the benchmark for comparative European findings on children's experiences of risks and safety online.[8] The *Net Children Go Mobile* project, carried out in 2014,[9] replicated major parts of the *EU Kids Online* survey, adding a focus on mobile devices, with 3,500 European 9-16 year-old Internet users in 7 countries, thus providing an opportunity for comparative findings and identifying trends (Mascheroni & Cuman 2014). Combined, they make up the single largest dataset of its kind in Europe and act as the key reference point for empirical findings on children's experiences of risk and safety online (Livingstone et al. 2014). While a further phase of data collection is currently underway, this does not include all countries and lacks crucial European funding support with the result that in some European countries little if any empirical evidence is available to guide policy making since the last iteration of the *EU Kids Online* survey (Idate & Technopolis 2014).

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[8] www.eukidsonline.net. *EU Kids Online* is a network of researchers now in over 33 countries, has over successive phases sought to enhance knowledge of European children's online opportunities, risks and safety through multiple research methods to map children's and parents' experience of the Internet. In 2010, the *EU Kids Online* survey conducted in-home face-to-face interviews with 25,000 European 9-16 year old Internet users and their parents in 25 countries.

[9] The *Net Children Go Mobile* project, co-funded under the Safer Internet Programme studied the post-desktop media ecology that children inhabit and its consequences on young people's online experiences. The seven countries included in the project were: Belgium, Denmark, Ireland, Italy, Portugal, Romania and United Kingdom. http://netchildrengomobile.eu/

2.   PERCEIVED RISKS AND HARM

KEY FINDINGS

- Children engage in diverse online activities that, depending on the circumstances, may involve 'risky opportunities'. Risks and opportunities go hand in hand though important risks do not inevitably lead to harm. The *EU Kids Online* **classification of online content, contact and conduct risks** provides an important framework for governance and child online safety considerations.

- **Content risks for children are pervasive:** Over half of 9-16 year-olds reported there were things online that made them 'uncomfortable, upset or feel they shouldn't have seen it'. **Exposure to sexual images online is relatively common.** However, not all who had seen sexual content were adversely affected by it.

- **Cyberbullying is the contact risk that most adversely affects children** and among the most common reasons for children contacting Insafe Helplines. **Increased levels of online hate, abuse and extremist content online** have also been reported.

- **Sexual harassment and the problematic sending and receiving of sexual messages** are contact and conduct risks that have been reported with varying incidence rates. Commercial risks by contrast have received less attention.

In the course of their Internet use, children engage in various activities which, depending on the circumstances, may be beneficial for their development or may be considered 'risky opportunities' that could cause harm but which children engage in to experiment online with relationships, intimacy and identity (Livingstone 2014). Risks and opportunities, as research demonstrates, are positively co-related – the more opportunities, the more risk – and as such should not be treated in isolation, either from a research or policy perspective. That said, most research on children's online safety has tended to focus on the incidence of risk. It is also important to state that risk refers to the probability and not the inevitability of harm and is not inherently bad. Rather, it is those offline as well online risk factors that make some children particularly vulnerable that merit most attention.

Drawing on an extensive review of the literature on children's Internet experiences, *EU Kids Online* developed a classification of online risks that distinguishes between *content*, *contact* and *conduct*-related risks, which may arise in conditions brought by distinct modes of communication, e.g., one-to-many where typically the child is a *recipient* of mass-distributed content; adult-to-child where the child is a *participant* in an interactive situation predominantly driven by adults; and peer-to-peer where the child is an *actor* in an interaction in which s/he may be initiator (Livingstone & Haddon 2009). Table 1 sets out illustrative examples of content, contact and conduct risks within distinct areas related to aggression, sexuality, values-based communication and commercial content.

Table 1: A classification of online risks for children

	Content Child as receiver (of mass productions)	Contact Child as participant (adult-initiated activity)	Conduct Child as actor (perpetrator / victim)
Aggressive	Violent / gory content	Harassment, stalking	Bullying, hostile peer activity
Sexual	Pornographic content	'Grooming', sexual abuse or exploitation	Sexual harassment, 'sexting'
Values	Racist / hateful content	Ideological persuasion	Potentially harmful user-generated content
Commercial	Embedded marketing	Personal data misuse	Gambling, copyright infringement

Source: *EU Kids Online* (2009)

As a now widely cited and influential typology of online risks, this classification has provided a useful framework to explore the governance and policy-related issues that arise in distinct settings and the appropriate policy measures and strategies needed to adequately respond (Livingstone, Mascheroni, et al. 2017).

2.1. Content risks and harm

Content risks arise in diverse contexts where children access or accidentally come across content online that may be unsuitable for their age or which may cause them to be upset in varying degrees of severity. Given the unregulated nature of much online content and the unrestricted access to the Internet available to many children, risks arising from inappropriate or potentially harmful content are pervasive. Specific types of content that may pose risks to children, and for which varying strategies may be deployed, accordingly consist of: *aggressive* - frightening or violent content; content of a *sexual* nature; content that is offensive in terms of *values* including racism or hate speech; and content that is commercial in origin.

Drawing on data from *EU Kids Online*, when asked if there were things on the Internet that would bother children of their own age, 55% of 9-16 year-olds in Europe confirmed that there were things online that made them 'uncomfortable, upset or feel they shouldn't have seen it' (Livingstone et al. 2011). Responding in their own words, children expressed most concern about *content* risks above *contact* or other risks, naming pornographic or *sexual* content (23%) as the most common things that most bother them online, followed by *violent/aggressive* content (18%) as well as other named risks including scary or gory content, content about self-harm or suicide or anorexia/bulimia, and racist or hateful speech (Livingstone et al. 2013).

Comparing *EU Kids Online* and *Net Children Go Mobile* data, children also appear to becoming less satisfied with the online content available to them. In 2010, just under half of 9-16 year-olds (47%) said it was very true that 'There are lots of things on the Internet that are good for children of my age'. By 2014, this had declined to 41% (Livingstone et al. 2014). Both studies highlighted the increasing prominence of potentially negative user-generated content (such as websites where people promote eating disorders, share their experiences of taking drugs, discuss ways of physically harming themselves or committing suicide), where the numbers of children who reported encountering such content had all increased. Moreover, the proportion of children who reported 'being bothered or upset online in the past year' had increased from 13% to 17% (Livingstone et al. 2014).

2.2. Cyberbullying and harmful online communication

The effects of bullying and harassment on children all pre-date the Internet and have consistently been of serious concern both to parents and policy makers. The online world adds a new dimension to harmful communication, and its use as a means to bully children or where perpetrators can use semi-anonymity to harass others has given rise to increased public alarm (Smith & Steffgen 2013).

Bullying, both online and offline, has been widely researched though with differing approaches and measures leading to significant variability in prevalence findings (Brochado et al. 2017). Most studies tend to focus on cyber victimisation experiences with fewer on perpetration or coping/resilience. There are also important national differences in how online bullying is interpreted and defined. While there is much commonality in terms of its core features (intentionality, imbalance of power, repetition, anonymity, and public vs. private features, for instance), Menesini et al. (2012) found that some countries, e.g. France, more readily identified certain online behaviours as cyberbullying than others.

Insafe helplines regularly record cyberbullying and online hate speech as the most frequently reported concerns (Dinh et al. 2016). In the *EU Kids Online* survey, bullying was not the most prevalent of negative experiences that children described though it was the one that was found to have the most severe impact:

- 6% reported having been bullied online (on a social networking site or by instant messaging). About half as many (3%) admitted to having bullied others;
- Around 60% of those who bully have been bullied by others. Those who have bullied or been bullied online are more vulnerable psychologically and more likely to come from socio-demographic groups experiencing other vulnerability (Görzig 2011);
- Most bullying was found to take place in person, face-to-face (13%) compared to 6% online and 3% by mobile phone calls or texts;
- Online bullying varies significantly across countries and appears more common in countries where bullying in general is more common;
- In Romania and Estonia more than four in ten children reported having been bullied, twice the average across all countries.

In the seven countries included in *Net Children Go Mobile*, cyberbullying was found to have increased from 8% to 12% overall, and was especially marked among girls (rising to 15%), and among the youngest age group (aged 9-10 years), rising from 3% to 15% experiencing some form of cyberbullying. Significant country differences were also in evidence with the biggest increase from 2010 to 2014 in the percentage of children who have been cyberbullied in Denmark (a rise from 12% to 21%) and Ireland (from 4% to 13%) (Livingstone et al. 2014).

Peer-to-peer bullying is not the only form of harmful content or contact that affects young people online. The apparent increase of online hate, abuse and extremist content online has also given cause for alarm, amidst calls for the regulation of social media companies who appear to struggle to prevent their platforms from being used to spread hatred (UK Parliamentary Home Affairs Select Committee 2017). A study undertaken by the UK Safer Internet Centre found that 82% of 13-18 year-olds said they have seen or heard something hateful about a certain group on the Internet (i.e. potentially offensive, mean or threatening behaviour targeted at or about someone because of their race, religion, disability, gender, sexual orientation or transgender identity) (UK Safer Internet Centre

2016). A significant minority, over 1 in 10 (12%), said they witness online hate all or most of the time.

2.3. Sexual online content and sexual harassment

Evidence shows increasing numbers of children coming into contact with sexual images online, which may be encountered both offline and online, though as found by *EU Kids Online*, the Internet is now the most common way for children to come across sexual content. In 2010, 14% of 9-16 year-olds in 25 European countries reported coming across sexual images on a website (Livingstone et al. 2011, p.50). The group of countries in *Net Children Go Mobile* reported much higher findings and seeing sexual images at all rose from 26% to 28% between 2010 and 2014. Among older teens, 15-16 years old, the increase was from 42% to 44% (Livingstone et al. 2014, p.23). Sexual images that children report include images or videos of someone who is naked. 11% of all children aged 11-16 and almost 70% of those who have seen sexual images online report this. Nearly half of those who report seeing sexual images online claim to have seen images or videos of someone's private parts or of people having sex. In addition, 2% have been asked to talk about sexual acts with someone online and 2% per cent have been asked for an image of their genitals (Livingstone et al. 2011).

While exposure to sexual images online is relatively common, not all who had seen sexual content were adversely affected by it. While one in seven (14%) of 9-16 year-olds in Europe have encountered sexual images online, one in three of those who have seen it, or 4% of all children, say they were upset by the experience. Girls were found more likely to be bothered than boys (39% compared to 26% of those who had seen sexual content). Younger children were also more likely to be upset by encountering sexual content with 56% of 9-10-year-olds and 42% of 11-12 year-olds who had seen sexual images reported being bothered by the experience. Among those who have been bothered by sexual content online, almost half were either fairly (28%) or very (16%) upset at what they saw. However, it is also the case that most children (59%) aged 11-16 who had been bothered by sexual images online said they got over it straight away (Livingstone et al. 2011).

The sending and receiving of sexual images or "sexting' is a separate conduct risk that has likewise received much attention amid policy concerns about the risks and danger it poses to young people (Ringrose et al. 2012; Lee et al. 2015). While there continues to be much speculation and media coverage about its prevalence and impact, there are still too few studies available to report accurately about the phenomenon. 'Sexting' itself is a sometime problematic shorthand for a diversity of practices that include 'the exchange of sexual messages or images' (Livingstone et al. 2011), the 'self-production of sexual images' (Cooper et al. 2016), or the 'sending and sharing of both solicited and unsolicited nude or nearly nude images or videos' (UK Safer Internet Centre et al. 2017). As such, it is a highly varied phenomenon with widely varying rates of incidence being reported.

A systematic review of 12, mostly US-based studies, with participants ranging between 10 and 19 years of age, found incidence rates varying from 3% to 34% for sending images and 7% to 42% for receiving images (Klettke et al. 2014). Comparative findings from the *EU Kids Online* and *Net Children Go Mobile* studies found that the numbers receiving sexual messages had declined slightly from 14% to 11% between 2010 and 2014. Just 3% of young people across Europe aged 11–16 said that they had sent a sexual image with relatively few national differences (Livingstone et al. 2011). Findings from a more recent

Daphne-funded project provide an updated context. The STIR project,[10] across five countries in Europe, examined sexting in the context of romantic relationships among young people, aged 14-17 and found that while sexting is occurring to a significant extent, the majority of young people are not sexting. The highest proportion of young people sending sexual messages to a partner, either during or after the relationship had ended, was in England (38%), followed by Norway (30%), and Bulgaria (28%). In Italy and Cyprus, lower incidence rates were reported: 22% and 10% respectively reported sending a sexual message (Wood et al. 2015).

The legal and policy consideration of risks arising from practices of 'sexting' are complex, not least due to the fact that the viewing or distribution of sexually explicit material when the subject is a minor can be considered child pornography, with serious legal consequences for senders and receivers (Lorang et al. 2016). While the sharing of sexual images typically occurs within and as part of intimate relationships (Lee et al. 2015), particular concern arises in the context of the non-consensual forwarding of images to peers or having them posted online in so-called acts of 'revenge porn' (Livingstone, Davidson, et al. 2017). Research has also begun to explore the relationship between the regular viewing of online pornography, sexual coercion and abuse, and the sending of sexual images/messages (Stanley et al. 2016).

2.4. Risks related to commercial content

A further dimension to online risks may be said to derive from the thoroughly commercialised nature of the Internet with such features as embedded marketing, profiling of users, blurring of commercial communications and targeting of advertisements towards children when they may lack the skills to identify commercial messages or make informed choices based on the information available to them. A European Commission-supported study on the impact of online marketing found children to be exposed to a number of problematic marketing practices in online games, mobile applications and social media sites, which are not always understood by children as consumers (Lupianez-Villanueva et al. 2016). In particular, embedded or contextual advertisements in online games popular with children were found to have an effect on children without their being aware of it. In-app purchases and the requirement to pay in order to continue game play, or to avoid exposure to advertising, were found to be particularly problematic.

Evidence from this and other studies of awareness of commercial risks suggests there is much scope for further awareness raising and education in consumer literacy. While children report they are able to identify most commercial content and/or claim not to be affected by it, they are much less familiar with marketing techniques such as advergames and less aware of the role of in-app purchase models on their play behaviour (Lupianez-Villanueva et al. 2016, p.95). Parents were also found to be more concerned with issues of cyber bullying or violent content than with risks related to commercial content. Believing that their children were not affected by online marketing or that it did not constitute a major risk, parents were shown to be less involved in discussing with their children issues related to commercial risks. As such, the study concludes, children's susceptibility and lack of experience may make them more vulnerable to marketing tactics, and they are therefore in need of greater protection against its pressures and influence (Lupianez-Villanueva et al. 2016).

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[10] The Daphne funded project 'Safeguarding teenagers' intimate relationships' (STIR) included a survey with 4564 young people aged between 14 and 17 in a number of schools across five countries in Europe.

3.   TRENDS IN ONLINE CRIMES AFFECTING CHILDREN

KEY FINDINGS

- **Cybercrimes affecting children incorporate a range of contact and conduct abuses that are both harmful and illegal** and may include persistent harassment or stalking, grooming and sexual exploitation, radicalisation and extremist ideologies as well as commercial exploitation or misuse/theft of personal data.

- **Cybercrime targeting children as well as the majority of online sexual abuse of children is non-commercial in nature** and in many instances of extortion or abuse, the perpetrators are known to victims. **Europol, however, reports increased evidence of extortion activity being carried out by organised crime groups.**

While digital technologies deliver numerous benefits to citizens, their advantages are frequently offset and trust undermined by the extent to which the Internet also supports illegal activity and cybercrime. The incidence of ICT-related exploitation and abuse of children is recognised to be a serious and growing problem even if the extent of harm to children is difficult to quantify (Slavtcheva-Petkova et al. 2015). Putting in place measures to protect children against all forms of online criminal activity, but in particular, risks of grooming, sexual abuse and exploitation, has been one of the most consistent features of child online safety policy. Using the *EU Kids Online* classification of risks, online behaviour that may be both *harmful* and *illegal,* refers to the following indicative area of risk:

- acts of *aggression* such as harassment or stalking;
- contact that is *sexual* in nature and involves risks of grooming, exploitation or child sexual abuse;
- online interaction involving *values* and which may include attempts at radicalisation or which involve extremist ideologies;
- or in relation to *commercial* abuse consist of identity theft, hacking and misuse of personal data.

Victimisation of children is possible under any of these headings and while typically not within most young people's experiences and beyond the normal remit for Internet safety education, the seriousness of issues of cybercrime affecting children is such that it occupies a key role in policy to protect children online.

3.1.   Online child sexual abuse

The production and consumption of child sexual abuse material remains a key focus for governments and law enforcement internationally. INHOPE, the international network of Hotlines dealing with illegal content, in 2016 received in excess of 9 million reports to its members with close to 8.5 million confirmed as containing illegal child sexual abuse material (INHOPE, 2017). In a European context, the Internet Watch Foundation, which proactively searches the open Internet for child sexual abuse images and videos, in 2016 processed 105,420 reports, of which 59, 550 were found to contain illegal content. 57,335 URLs were confirmed as containing child sexual abuse imagery, having links to the imagery, or advertising it. In addition, 455 newsgroups were confirmed as containing child

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sexual abuse imagery. 4,031 reports of alleged criminally obscene adult content were also made to the Hotline (Internet Watch Foundation 2017).

Most child sexual exploitation, offline or online, is perpetrated for personal gratification rather than for commercial motives. Online, the vast majority of child abuse is distributed non-commercially across a number of different platforms including peer-to-peer (P2P) technologies, social networking, file hosting services as well as the hidden Internet or Darknet. A threat assessment by the UK's Child Exploitation and Online Protection Centre estimated that some 70,000 online images of child abuse were shared in the UK in 2012 with approximately 50,000 people in the UK downloading or sharing such images (CEOP 2013). Similarly, some 87% of all reports of suspected cases of child sexual abuse material registered by INHOPE member hotlines were categorised as non-commercial.

Trends in the production of online child sexual exploitation material (CSEM) for financial gain have been identified by Europol as a growing threat (Europol 2017b). In particular, Live Distant Child Abuse (LDCA), the live streaming video sharing platforms of child abuse for payment, has been identified as a significant concern in emerging markets (European Financial Coalition 2013). According to the UN Special Rapporteur on the sale of children, child prostitution and child pornography, the market for commercial sexual exploitation of children within the context of international travel and tourism has expanded greatly both through the ease of international travel and the accessibility of ICTs and Internet technologies (UN Special Rapporteur 2016). While difficult to quantify given the highly dispersed nature of the crime, estimates for the global trade in commercial child sex tourism trade suggest that over a million children are exploited and abused every year, with increasingly blurred lines between child prostitution, child trafficking and child sex tourism leaving no region in the world untouched (ECPAT International 2016).

3.2.   Online sexual coercion and extortion of children

Coercion and sexual extortion has been identified by Europol as a recent extension of cybercrime affecting children (Europol & EC3 2017). Online sexual coercion/extortion involves an offender using an explicit image of a minor, obtained incidentally or through coercion or deception, to further coerce or extort the child into producing even more explicit sexual content, to gain physical access to the child for sexual purposes, or for the purposes of extorting money (Europol 2017a). According to Europol, there is some evidence that this activity is increasingly carried out by organised crime groups targeting, manipulating and extorting victims in a systematic way in order to extort money from them (Europol 2017a, p.35).

A study of victimisation in 'sextortion' episodes in the United States found that 60% of respondents who were minors when the extortion occurred knew the perpetrators in person, often as romantic partners. Most knowingly provided images to perpetrators (75%), but also felt pressured to do so (67%). About one-third involved physical threats, assaults and stalking for periods of 6 months or more (Wolak & Finkelhor 2016). A further category included perpetrators who met victims online or used a sexual image obtained from the victim or some other source to demand more images or sexual interactions. Only 16% of respondents reported episodes to law enforcement.

4. EMERGING CHALLENGES AND RISKS

KEY FINDINGS

- **Keeping pace with the rate of change in digital technologies, their uses and unintended consequences** is a key challenge of child online safety.

- **Children's use of digital technologies at ever-younger** ages likewise presents new emerging challenges for their safety and for digital parenting.

- **The Internet of Things** poses challenges and risks for children both in terms of **privacy and security** as well as the **incremental effects of data collection over extended periods of time**.

Keeping pace with the digital technology sector is an important part of the challenge in child online safety. The rapid innovation cycles that are integral to the sector frequently outstrip the ability of policy or regulation to foresee potential consequences or risks. Additionally, changing patterns of use, including demographic changes, require a constant review of new and emerging risks particularly for vulnerable populations.

A case in point is the age at which children use digital devices to go online and experience varying levels of risk. The emerging evidence for children going online at an ever-younger age was highlighted in both *EU Kids Online* and *Net Children Go Mobile* studies which found that the age of first Internet use was typically 7 years of age (Mascheroni & Cuman 2014). Subsequent studies for the European Commission Joint Research Centre have documented the interactions of the youngest children, aged 0 to 8, and their families with digital technology found in today's typically media-rich homes (Chaudron 2015). Children were found to interact daily with a variety of digital tools and devices. Tablets and portable media devices were found to be particularly popular ways for children to extend play activities, to watch videos, engage with creative applications, and to communicate with family members. Tablets were shown to be the favourite, shared device in family setting due to their screen size and ease of use for younger children. Smartphones allow children both more personalised and private online use and allow them to watch videos, play games, send messages, take pictures, and make video-calls without parental supervision. Drawing on qualitative data and interviews with parents, the study concluded that despite the safeguards put in place by parents (time and access limits, parental control tools etc.), parents still seemed to have little knowledge of the actual digital activities of their children or the risks that might arise from ill-configured devices (Chaudron 2015, p.8).

The *ICT Coalition for Children Online* has highlighted that it is in the field of entertainment technologies aimed at younger children that risks associated with new and emerging technologies are particularly apparent (Croll 2016). The Internet of Things (IoT) and the interconnectivity of devices present two different dimensions to smart technologies in the home. These include those technologies and services that are aimed at a general audience but which may also be used by children, as well as those that are specifically designed for children, such as interactive and connected toys. Internet connected toys are of particular concern in this regard. As 'hybrid' products – a physical product owned by the child consumer but a software service of more uncertain duration (Holloway & Green 2016) – they present particular safety, security and privacy concerns. Pre-eminent in this context

are heightened concerns for the security and privacy of personal data, in light of the questions over the security of devices that have been proven to be vulnerable to hacking as well as the incremental effects of data collection and sharing over extended periods of time (Chaudron et al. 2017). To date, there has been relatively little regulatory or safety discussion regarding the Internet of Toys. Most recently, the Federal Trade Commission in the United States has confirmed that for the purposes of data collection, connected toys come within the terms of COPPA, the Children's Online Privacy Protection Act, and are subject to the same rules as websites and websites providers of other online services to children under the age of 13 (Committee on Commerce Science and Transportation 2016; Future of Privacy Forum & Family Online Safety Institute 2016).[11]

The application of Virtual Reality technologies to games, entertainment technologies and online services is also developing at a fast pace. VR technologies offer important opportunities for the creative and cultural industries, as well as promising applications in the medical, transport, building, retail, life-long learning and education sectors. For children, however, there are additional concerns regarding the health risks that VR technologies may pose as well as the privacy and safety risks that may arise from children's use which need to be separately considered.

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[11] Future of Privacy Forum, Federal Trade Commission: COPPA Applies to Connected Toys, June 26, 2017. https://fpf.org/2017/06/26/federal-trade-commission-coppa-applies-connected-toys/
See also: Future of Privacy Forum (2016) *Kids & the connected home: privacy in the age of connected dolls, talking dinosaurs, and battling robots,* Washington DC, Family Online Safety Institute.

REFERENCES

- Barbovschi, M., Macháčková, H. & Ólafsson, K., (2015), *Underage Use of Social Network Sites: It's About Friends*, Cyberpsychology, Behavior, and Social Networking, 18(6), pp.328–332.

- Brochado, S., Soares, S. & Fraga, S., (2017), *A Scoping Review on Studies of Cyberbullying Prevalence Among Adolescents*, Trauma, Violence, and Abuse, 18(5), pp.523–531.

- CEOP (2013), *Threat Assessment of Child Sexual Abuse and Exploitation*, London.

- Chaudron, S. et al., (2017), *Kaleidoscope on the Internet of Toys Safety, security, privacy and societal insights*, Luxembourg.

- Chaudron, S., (2015), *Young Children (0-8) and Digital Technology: A qualitative exploratory study across seven countries*, Luxembourg: European Commission, Joint Research Centre.

- Committee on Commerce Science and Transportation (2016), *Children's Connected Toys: Data Security and Privacy Concerns,* Office Of Oversight And Investigations Minority Staff Report, Washington DC.

- Committee on Culture and Education (2012), *Protecting children in the digital world (2012/2068(INI)),* Brussels, European Parliament.

- Cooper, K. et al., (2016), *Adolescents and self-taken sexual images: A review of the literature*, Computers in human behavior, 55, pp.706–716.

- Council of Europe (2016), *Competences for Democratic Culture: Living together as equals in culturally diverse democratic societies*, Strasbourg.

- Croll, J., (2016). *Let's Play it Safe Children and Youths in the Digital World*, Brussels, ICT Coalition for Children Online.

- Dinh, T. et al., (2016), *Insafe Helplines: Operations, effectiveness and emerging issues for Internet safety helplines*, Brussels, Insafe.

- ECPAT International (2016), *The Global Study Report on Sexual Exploitation of Children in Travel and Tourism*, Bangkok, ECPAT Internetional.

- EU Kids Online (2011), *EU Kids Online. Final Report*., London, LSE.

- Eurobarometer (2007), *Safer Internet for Children Qualitative Study in 29 European Countries Summary Report*, Brussels.

- Eurobarometer (2008), *Towards a Safer Use of the Internet for Children in the EU: A Parents' Perspective*, Brussels.

- European Commission (2012), *European Strategy for a Better Internet for Children COM(2012)196*, Brussels.

- European Commission (1996) *Green Paper On The Protection Of Minors And Human Dignity In Audiovisual And Information Services COM(96) 483*, Brussels.

- European Financial Coalition (2013), Strategic Assessment of the Commercial Sexual Exploitation of Children Online,

- Europol (2017a), *Internet Organised Crime Threat Assessment (IOCTA) 2017*,

- Europol (2017b), *Serious and organised crime threat assessment: Crime in the age of technology*,

_____

- Europol & EC3 (2017), Online sexual coercion and extortion as a form of crime affecting chidren,

- Future of Privacy Forum & Family Online Safety Institute (2016) *Kids & the connected home: privacy in the age of connected dolls, talking dinosaurs, and battling robots*,

- Görzig, A. (2011), *Who bullies and who is bullied online?* London, LSE: EU Kids Online.

- van der Hof, S., van den Berg, B. & Schermer, B. eds., (2014) *Minding Minors Wandering the Web: Regulating Online Child Safety*, The Hague: T.M.C. Asser Press.

- Holloway, D. & Green, L., (2016) *The Internet of Toys,* Communication Research and Practice, 2(4), pp.506–519.

- Idate & Technopolis (2014), *Benchmarking of Safer Internet policies in Member States and policy indicators*. Final Report, Brussels.

- Internet Watch Foundation (2017), *IWF Annual Report 2016*, London.

- Klettke, B., Hallford, D.J. & Mellor, D.J. (2014), *Sexting prevalence and correlates: A systematic literature review*, Clinical Psychology Review, 34(1), pp.44–53.

- Lee, M. et al., (2015), *Sexting among young people: Perceptions and practices*, Available at: http://www.aic.gov.au/media_library/publications/tandi_pdf/tandi508.pdf.

- Lenhart, A. et al., (2011), *Teens, Kindness and Cruelty on Social Network Sites*. Washington DC, Pew Research Center, pp.1–86.

- Livingstone, S. et al., (2014), *Children's online risks and opportunities: Comparative findings from EU Kids Online and Net Children Go Mobile*, London, LSE: EU Kids Online.

- Livingstone, S. (2014) *Developing social media literacy: How children learn to interpret risky opportunities on social network sites*, Communications, 39(3), pp.283–303.

- Livingstone, S. et al., (2013), *In their own words: What bothers children online?* London, LSE: EU Kids Online.

- Livingstone, S. (2013) *"Knowledge enhancement": the risks and opportunities of evidence-based policy*, in B. O'Neill, E. Staksrud, & S. Mclaughlin, eds. Towards A Better Internet for Children: Policy Pillars, Players and Paradoxes, Goteborg, Sweden: Nordicom.

- Livingstone, S. et al. (2011), *Risks and safety on the Internet: The perspective of European children. Full Findings*, London, LSE.

- Livingstone, S., Carr, J. & Byrne, J. (2015) *One in Three: Internet Governance and Children's Rights*, London.

- Livingstone, S., Davidson, J. & Bryce, J. (2017), *Children's online activities, risks and safety A literature review by the UKCCIS Evidence Group*, London, UKCCIS. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/650933/Literature_Review_Final_October_2017.pdf.

- Livingstone, S. & Haddon, L. (2009) *EU Kids Online: Final report. EC Safer Internet Plus Programme Deliverable D6.5*, LSE, London.

- Livingstone, S. & Helsper, E. (2007), *Gradations in digital inclusion: children, young people and the digital divide*, New Media Society, 9, pp.671–696.

- Livingstone, S., Mascheroni, G. & Staksrud, E. (2017), *European research on children's Internet use: Assessing the past and anticipating the future*, New Media & Society, pp.1–20.

- Lorang, M.R., McNiel, D.E. & Binder, R.L. (2016), *Minors and sexting: Legal implications*, Journal of the American Academy of Psychiatry and the Law, 44(1), pp.73–81.

- Lupianez-Villanueva, F. et al. (2016), *Study on the impact of marketing through social media, online games and mobile applications on children's behaviour*, Brussels.

- Mascheroni, G. & Cuman, A. (2014), *Net Children Go Mobile. Final Report*, Milano.

- Menesini, E. et al. (2012), *Cyberbullying Definition Among Adolescents: A Comparison Across Six European Countries*, Cyberpsychology, Behavior, and Social Networking, 15(9), pp.455–463.

- Ólafsson, K., Livingstone, S. & Haddon, L. (2014), *Children's Use of Online Technologies in Europe: A review of the European evidence base*, London, LSE: EU Kids Online.

- Ringrose, J. et al. (2012) *A Qualitative study of children, young people and "sexting."* London, NSPCC.

- Savirimuthu, J., (2012) *Online Child Safety: Law, Technology and Governance*, New York: Palgrave Macmillan.

- Slavtcheva-Petkova, V., Nash, V.J. & Bulger, M. (2015), *Evidence on the extent of harms experienced by children as a result of online risks: implications for policy and research*, Information, Communication & Society, 18(1), pp.48–62.

- Smith, P.K. & Steffgen, G. (2013), *Cyberbullying through the New Media: Findings from an international network*, London: Psychology Press.

- Staksrud, E., Ólafsson, K. & Livingstone, S. (2012), *Does the use of social networking sites increase children's risk of harm?* Computers in Human Behavior.

- Stanley, N. et al. (2016), *Pornography, Sexual Coercion and Abuse and Sexting in Young People's Intimate Relationships*, Journal of Interpersonal Violence,.

- UK Parliamentary Home Affairs Select Committee (2017), *Hate crime: abuse, hate and extremism online - Home Affairs Committee*, London, House of Commons.

- UK Safer Internet Centre (2016), *Creating a Better Internet for All. Young People's experiences of online empowerment and online hate*, Available at: www.saferinternet.org.uk.

- UK Safer Internet Centre et al. (2017), *Young People and Sexting—Attitudes and Behaviours*,

- UN Special Rapporteur on the sale of children, child prostitution and child pornography (2016), *25 years of fighting the sale and sexual exploitation of children: addressing new challenges*, Geneva, United Nations.

- UNICEF (2017), *The State of the World's Children 2017. Children in a Digital World*, New York N.Y.

- Wolak, J. et al. (2018) *Sextortion of Minors: Characteristics and Dynamics*, Journal of Adolescent Health, 62(1), pp.72–79.

- Wolak, J. & Finkelhor, D. (2016), *Sextortion: Findings from an online survey about threats to expose sexual images*, University of New Hampshire.

- Wood, M. et al. (2015) *Images across Europe: The sending and receiving of sexual images and associations with interpersonal violence in young people's relationships*, Children and Youth Services Review, 59, pp.149–160.

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