

In their own words: What bothers children online?

European Journal of Communication
2014, Vol. 29(3) 271–288
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0267323114521045
ejc.sagepub.com



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Abstract

In an open-ended survey question to European 9- to 16-year-olds, some 10,000 children reported a range of risks that concern them on the internet. Pornography (named by 22% of children who mentioned risks), conduct risk such as cyber-bullying (19%) and violent content (18%) were at the top of children's concerns. The priority given to violent content is noteworthy insofar as this receives less attention than sexual content or bullying in awareness-raising initiatives. Many children express shock and disgust on witnessing violent, aggressive or gory online content, especially that which graphically depicts realistic violence against vulnerable victims, including from the news. Video-sharing websites such as YouTube were primary sources of violent and pornographic content. The findings discussed in relation to children's fear responses to screen media and the implications for the public policy agenda on internet safety are identified.

Keywords

Children's perceptions, online risks, policy implications, violent content, YouTube

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Introduction

Racist messages; sexual messages; some sending horror movies such as *Russian Morgue*. (Girl, 11, Romania)

Propositions to meet from people whom I do not know, photos of naked people, bullying somebody or scenes showing homicide. (Boy, 12, Poland)

Bad humour referring to disabilities, racism, sexism, war, etc. Hurtful messages from other people, embarrassing photographs published by others. (Girl, 15, Ireland)

Although children enjoy many stimulating and valuable experiences on the internet, they also find the internet risky, even harmful, as illustrated by the above quotations from children asked to describe what bothers or upsets children of their age on the internet. Research has shown that, as children's access to online opportunities grows, so does their exposure to risk of harm (Livingstone et al., 2012). An increasing body of survey research is examining the prevalence and distribution of risks so as to inform the public policy agenda, target awareness-raising and develop tools for child empowerment and protection online (Livingstone et al., 2012; O'Neill et al., 2013; Palfrey et al., 2008; Staksrud, 2013; UNICEF, 2012).

The EU Kids Online survey of 25,000 European children found that 30% of 9- to 16-year-old internet users had had contact online with someone not met face-to-face, and 9% had gone to a face-to-face meeting with someone first met online. Further, 21% of 11- to 16-year-olds had come across at least one type of potentially harmful user-generated content, while 15% (of 11- to 16-year-olds) had seen or received sexual messages on the internet. Next most common, 14% of 9- to 16-year-olds had seen sexual images on websites in the past year and 6% had been sent nasty or hurtful messages on the internet (Livingstone et al., 2012). Of these risks, online bullying resulted in the highest proportion of children being upset; 'sexting' and pornography were perceived as less upsetting, and meeting new online contacts offline was the least likely to upset children.

Surveys generally ask closed-ended questions on areas of already-established policy interest, although qualitative researchers are beginning to investigate a wider array of risks – including pro-anorexia sites (Bond, 2012), intrusive commercial practices (Nairn and Dew, 2007), invasions of privacy (boyd and Marwick, 2011), viruses and popups (Eurobarometer, 2007) and unkind behaviour (Safer Internet Centre, 2013). This article analyses an open-ended survey question which reveals the range of children's concerns about the online environment. The aim is to understand which risks concern them the most, how they perceive them and how their concerns compare with those on the public policy agenda.

The study is situated within the new sociology of childhood tradition that emphasises a child-centred methodology designed to recognise children's voices and experience (James et al., 1998). This tradition also recognises the counterbalancing effects of structural constraints from family, school and peer culture: online, these are theorised in terms of the affordances of the internet (Bakardjieva, 2005). Also pertinent to our enquiry is the long-established tradition of social psychological research on the potentially harmful effects of media on children's well-being, particularly regarding frightening, violent or sexual television, film or computer games (Bushman and Huesmann, 2006; Hoffner and Levine, 2007; Kirwil, 2012; Peter and Valkenburg, 2008).

The child-centred and effects traditions share an interest in children's accounts of the social contexts in which they engage with media and their emotional responses to them. For example, research has revealed how children watch scary films with siblings or friends for safety (Jerslev, 2001; Wilson, 1989), seek out sexual content precisely to learn what adults prefer they do not know about (Buckingham and Bragg, 2004) or try to get into films rated too old for them and then close their eyes at the shocking parts (Buckingham, 2006). Beyond children's actions, these social contexts are shaped by media regulators and parents (Millwood Hargrave and Livingstone, 2009). However, the historical trend is from an emphasis on shared media ownership in the family towards personalised and privatised media use, impeding parental management of children's access to media through rules or supervision (Livingstone, 2009). The result is pressure on policy-makers to initiate producer guidelines, codes of practice, safety and reporting tools, content ratings, filtering tools and privacy settings designed to ensure children are not unduly exposed to inappropriate content and contact (O'Neill et al., 2103).

Laudable though many of these initiatives have been, they have often been led more by a media panic agenda than one grounded in research with children (Haddon and Stald, 2009; Staksrud, 2013). Over the past decade, the policy agenda focused first on the threat from paedophile activities (grooming, child abuse images, 'stranger danger'), then on threats to children from peers (cyber-bullying, 'sexting'). Concern about exposure to pornography remains high, attention to internet 'addiction' is growing, and concern is rising regarding children's privacy (O'Neill et al., 2103). As the internet becomes increasingly embedded in activities from socialising to learning, exploring and participating, it is timely to ask whether policy-makers are now attending to the issues that genuinely concern children.

Method

A random stratified sample of 25,142 internet-using European children aged 9–16 years was interviewed at home during spring and summer 2010. In addition to many closed-ended questions, children were asked one open-ended question: 'What things on the internet would bother people of about your age?' Recognising the methodological and ethical challenges of researching children's conceptions of risk (Görzig, 2012; Ponte et al., 2013), each child wrote his or her answer privately on a piece of paper and put it in a self-sealed envelope so neither interviewer nor parent (if present) could see how the child answered. Importantly, the open-ended question was asked before any other questions about risk; thus children gave their unprompted views.

One in three (38%) identified one or more online risks that they think bother people their age on the internet ($N = 9636$ children: 5033 girls and 4603 boys). Response rates ranged from 73% of children in Denmark to 4% of those in Spain (with below 30% also in Austria, Slovenia, Hungary, Bulgaria and Czech Republic). This variation may be due to genuine differences in children's level of concern, or it may have resulted from differences in fieldwork methodology; hence, caution is needed in extrapolating to all countries. A standard coding scheme was piloted in the authors' four countries and revised before finalising coding instructions. Children's responses, written in 21 languages, were coded by native speakers.

Table 1. Kappa coefficients for intercoder agreement for each variable.

Variable	N	Kappa coefficient
Type of response	7508	0.85
Type of platform	6579	0.82
Number of risks mentioned*	6570	0.87*
First mentioned risk	6306	0.78
Second mentioned risk	2636	0.74
Third mentioned risk	765	0.77
Emotion	6435	0.63

Note: Data from Sweden were not double coded.

*Pearson correlation coefficient.

Of the 9636 children who identified risks, 54% identified one risk, 31% identified two risks and 15% identified three or more risks. Up to three risks per child were coded where applicable. For example, 'Scary clips or pictures/horror. Abusive messages/bullying', was coded as two risks; 'Comments on people's social account. I mean posting offensive language to me' was taken as referring to one risk. Verbatim responses were coded by two independent coders, and intercoder reliability is shown in Table 1. Additionally, illustrative responses were translated into English for the purposes of this article.

First coded was the *type of response*: 'No answer'; 'Does not know'; 'Nothing is upsetting'; 'Irrelevant answer'; 'Reports a problem of any kind'. Responses that mentioned problems of any kind were then coded in terms of the 40 *types of risk* identified through pilot analysis of the material (see Table 2). Some children mentioned a platform associated with the risk or an emotion reaction as part of their response. *Platforms* were coded as: 'Not mentioned'; 'Email'; 'Instant messaging'; 'Chat/chat room'; 'Facebook, Hi5, other SNS'; 'Twitter (or similar)'; 'Games/gaming'; 'Video-sharing sites (incl. YouTube)'; 'Websites'; 'Mobile phones'; 'Other (e.g. 'the computer')'. *Emotions* were coded as: 'No emotion conveyed in the response'; 'Fear (e.g. scary, worrying)'; 'Disgust (e.g. gross, nasty, offensive)'; 'Annoyance (e.g. annoying, irritating)'; 'Positive reaction (e.g. exciting, curious, cool, funny)'; 'Other – any other emotion not coded above'.

Findings and discussion

Key results include the diversity and distribution of risks, the most reported risks and the relation between risks and platforms.

Diversity of risks

Although the most mentioned risks are familiar from public and policy agendas (see Table 2), children identify a long and highly diverse list of risks that concern them. Examples include:

Pop up with things where you have to buy something. Or people who want to cheat on you.
(Boy, 10, Denmark)

Table 2. Frequency of coded risks by type.

Type of risk	N	%
CONTENT RISK (on sites, in mass messages, images, etc.)	8543	55.4
Pornographic content risks	3157	20.5
Pornographic or sexual content (including adult content, inappropriate content, naked people, pornography, private images)	3022	19.6
Violent pornography (e.g. violation, rape)	135	0.9
Violent content risks	2700	17.5
Violent/aggressive content (e.g. violence, torture, killing animals)	2357	15.3
Gory content (blood, pain, etc.)	343	2.2
Other content risks	2686	17.4
Unwanted content in general (not specified – e.g. inappropriate images)	1161	7.5
Scary content	530	3.4
Content about drugs	297	1.9
Commercial content (e.g. advertising to make money; sites that promise money)	242	1.6
Content about self-harm or suicide or anorexia/bulimia	235	1.5
Racist content	117	0.8
Hateful content	61	0.4
Content harmful to self-esteem (e.g. sites for us to feel badly about our body)	43	0.3
CONDUCT RISK (usually from other young people)	3155	19.4
Other mean or aggressive conduct (e.g. receiving nasty messages; threats, insults that lower our self-esteem and affect us psychologically)	786	5.1
Bullying (usually repeated aggression)	732	4.7
Unwelcome conduct in general (e.g. bad behaviour, vulgar language or swearing)	604	3.9
Hacking or misuse of personal information or data, specific violation of privacy	356	2.3
People saying bad things about you/damage to your reputation	283	1.8
Sharing images or photos	187	1.2
Sexual harassment or unwelcome ‘sexting’	101	0.7
Sharing personal information	106	0.7
CONTACT RISK (usually from adults)	2007	14.0
The possibility of inappropriate contact in general (e.g. nasty/bad people, strangers)	860	5.6
The possibility of inappropriate sexual contact in general (e.g. paedophile, grooming)	493	3.2
People pretending to be someone else (e.g. can’t tell who someone is, people lying about their identity, impersonation, fake identities)	276	1.8
Actual or attempted inappropriate contact – general	141	0.9
Actual or attempted inappropriate contact – sexual	80	0.5
Face-to-face meetings following online contact (e.g. meeting strangers)	83	0.5

(Continued)

Table 2. (Continued)

Type of risk	N	%
Ideological or religious or fundamentalist persuasion	25	0.2
Other people accessing your data/ being tracked/ cookies	49	0.3
OTHER RISK MENTIONS	1195	7.7
Virus (e.g. sites that show us issues of our interest and then come with virus)	317	2.1
Spam, phishing, scams, fraud (e.g. false companies, fraudulent information)	309	2.0
Pop-ups (unspecified, or commercial/marketing/advertising)	224	1.5
Lack of internet safety in general	78	0.5
Related to search (e.g. hard to find things, difficult to evaluate, unreliable information)	68	0.4
Related to hard/software (e.g. computer breakdown, slow internet, hard to install)	54	0.3
Spending too much time online (e.g. missing homework, sleep, meals etc., addiction)	51	0.3
Gambling	35	0.2
Rules on safety (e.g. don't out give information)	29	0.2
Illegal downloading	20	0.1
Health related risks (muscular, eye-sight etc.)	10	0.1
OTHER (any other risk not coded above)	544	3.5
TOTAL NUMBER OF RISKS MENTIONED BY CHILDREN	15444	100.0

Base: All 15444 online risks mentioned by the 9,636 children who mentioned any risk (up to three risks coded per child).

When someone sends me a message like 'I will kill you' or 'I will steal all your money'. (Boy, 12, Austria)

Anonymity (when getting anonymous messages one may read anonymous messages on forums). And perhaps the knowledge of the internetization of the world (everything is on the internet). (Girl, 16, Estonia)

This very diversity is noteworthy, perhaps resulting from 'the internetization of the world' in which, presumably, everything in the world is now online, for better or worse. This complicates the task of parents, teachers and policy-makers who seek to minimise the risk of harm to children.

Some responses seemed to arise from direct experience. For example, although only a few mentioned pro-anorexia websites and forums, these can be distressing to teenage girls:

The things that bother people about my age are the influence of bad websites such as how to diet or lose weight so you could be known as the pretty one; like vomiting things. (Girl, 15, Ireland)

Similarly, racist or political comments online can take precedence in particular contexts:

Negative statements about my country and introducing Muslims and Turkey in a wrong way bother me. (Boy, 15, Turkey)

The unwanted political advertisement. (Boy, 16, Czech Republic)

Other concerns echo those publicised in the mass media. Indeed, it seems that the very effort to raise awareness of online risks can worry children by suggesting problems that they are expected to worry about:

I think there are sites dealing with drugs or sexuality, and about bombs, like for example how to make a Molotov cocktail. (Boy, 16, Hungary)

One can use things on a social network against you, for example when you look for a job. (Girl, 16, Austria)

The majority of children my age would be bothered if someone would access their personal information or would edit their words to damage their reputation and their group of friends. (Boy, 13, Romania)

Few children mentioned some of the risks much discussed in public policy debates such as 'stranger danger' or 'internet addiction'. 'Stranger danger' was usually mentioned only vaguely, as a forms of inappropriate contact, although a sense of sexual threat can be discerned in quite a few responses:

Well, for example, when I am stupidly accosted by some guy. Like, 'Hey, can we meet some time? You are so cute!' or something like that. Well, I find molestations like that frightening. That's totally crazy, that once happened to a friend of mine. Some guys totally stalked her on 'SchülerVZ'. (Girl, 14, Germany)

When strangers message me on the internet, sex sites that open without me clicking on them. (Boy, 10, Austria)

To take a photo of me without my knowledge and upload it to an inappropriate website. (Girl, 10, Bulgaria)

Types and distribution of risks

Having coded the risks mentioned into one of 40 categories, these were further grouped according to EU Kids Online's classification of content, contact and conduct risks (Livingstone et al., 2012), as shown in Table 2. Content risks position the child as the recipient of, usually, mass-produced images or texts (although user-generated content is growing in significance). Contact risks position the child as participant in adult-initiated activities, possibly unwillingly or unwittingly. Conduct risks position the child as an

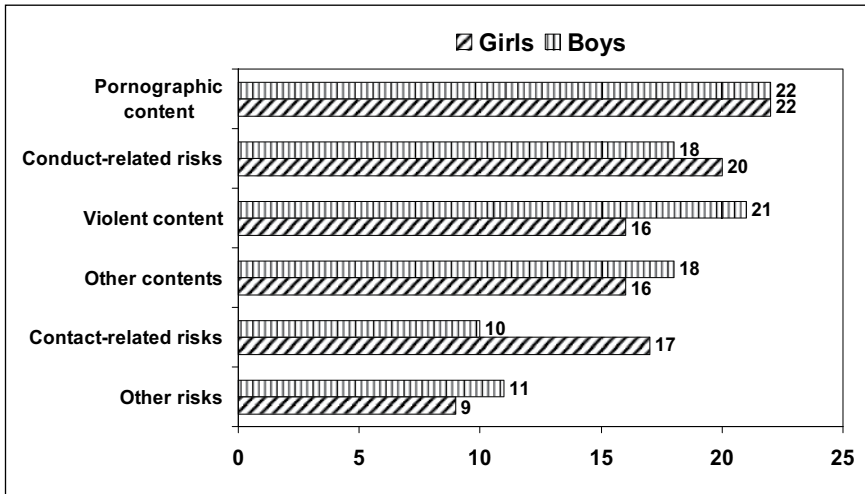


Figure 1. Percentage of types of risk mentioned, by gender.
Base: Risks mentioned first by 5033 girls and 4603 boys (aged 9–16 years).

actor in a peer-to-peer context. Over half (55%) of risks mentioned were related to content, 19% to conduct and 14% to contact; 11% concerned other risks. Within content risks, pornography ranked first, at 21% of all risks mentioned by children, followed by violence (18% of all risks mentioned).

To match risks to demographic information about respondents, further analysis was based on first-mentioned risks only. The results for first-mentioned risks are very similar to those for all risks: content risks predominate (58%), followed by conduct risks (19%), contact risks (13%) and other risks (10%).

Do children of different gender or ages focus on different risks? As Figure 1 shows, there is no gender difference for pornography: 22% of boys and girls mention pornographic content first. Boys are more concerned about violent content than girls (21% vs 16%); girls are more concerned than boys about contact (17% vs 10%) and conduct (20% vs 18%) risks. These gender differences are statistically significant (chi-square [5] = 140.26; $p < 0.001$; Kramer's $V = 0.121$; $N = 9636$).

There were also significant age differences, with more risks identified by older children. Younger children were more concerned about content and other risks. Children become more concerned about pornography as they enter their teens but then their concern declines. Concern over violent content is highest among 9- to 10-year-olds and declines with age. As children become older, they are increasingly concerned about interpersonal risks (conduct and contact). These age differences are statistically significant (chi-square [35] = 129.97; $p < 0.001$; Kramer's $V = 0.052$; $N = 9636$).

Although children were not asked directly how they felt about online risk, one in eight (12%) revealed an emotional response: 5% (431 children) indicated disgust, 4% (367 children) indicated fear and 3% (254 children) indicated annoyance. When emotional responses were expressed in relation to violence, these were mainly fear followed

by disgust, while responses to pornography were more often disgust, followed by fear (this reversal was statistically significant, chi-square [2] = 28.53; $p < 0.001$; Kramer's $V = 0.297$).

In what follows, we consider children's concerns regarding the most often mentioned risks of pornography and cyber-bullying in brief, since these are much discussed elsewhere (Livingstone et al., 2012; O'Neill et al., 2103; Palfrey et al., 2008; Staksrud, 2013). We then examine children's concerns about violent content online, since this has seemingly been overlooked by researchers and policy-makers.

Pornography

Pornography tops children's ranking of online risks (mentioned by one in five respondents); in this regard, the policy agenda reflects children's concerns. Children tended to avoid explicit descriptions, so it is hard to determine the extremity of the images that concern them though their pornographic nature is generally not in doubt:

Ugly pictures, ugly videos that suggest sex really bother me. (Boy, 11, Slovenia)

One time I was looking for a game and rude pictures came on the computer, people without clothes on. (Girl, 9, Ireland)

People who have sex on YouTube. (Boy, 9, Denmark)

See people having sex or naked people. (Boy, 10, Portugal)

Given the young age of many of these children, these findings lend support to those who call for improved digital literacy (especially in relation to pop-ups and searching) and/or more regulation by parents, governments or industry. Children often describe such exposure as accidental:

I think it is not appropriate for children of my age to see images of naked women, as in online advertisements that pop up when I am not looking for it, such as on the website where I check my email. (Girl, 15, Italy)

While it is possible that children are seeking to avoid blame for content that was, in reality, deliberately sought out, the simple distinction between accidental and deliberate exposure could usefully be rethought. Children may look for mild nudity and find more extreme content than they realised existed, for instance, or they act under peer pressure, and then they fear telling an adult lest their internet access is restricted (Staksrud, 2013).

Cyber-bullying

Conduct risks came second in children's ranking of concerns, a negative consequence of the rapid spread of personal and networked devices. Some comments are simply expressed: 'I don't like it when people speak nasty to you' (Boy, 10, Slovenia). But often,

conduct risks seem to require some contextualisation to explain how a problematic situation arises:

Well, mostly social networking because it gives you a link to almost anyone and people can get overly obsessive about that, i.e. checking people's status all the time, judging them over their pictures and hearing gossip or having mean things said to you. That's exactly why cyberbullying is so huge! They could just delete their profile because they're getting treated badly but they just won't because they've put so much effort into it. (Girl, 15, Ireland)

Sometimes the internet contains photos that are put there without the person's consent; I know that also groups against someone can be formed, where everyone who hates the person joins the group. (Boy 15, Belgium)

I think people will get upset by people writing statuses about them. And people could be upset because if you write anything nasty there isn't anything to remove it. (Girl, 9, UK)

Cyber-bullying and other peer-to-peer threats appear subtly embedded in the emerging but still uncertain social and communicative norms associated with social media. Group processes are important and can escalate beyond the intent of any individual. The line between jokey comments and hostility is often ambiguous. The fascination of interpersonal drama, cheered on by bystanders, spills over unpredictably into harm (boyd and Marwick, 2011). While retaining strong links to offline bullying, which often also centres on verbal aggression within the group, the weak ties and fragile alliances afforded by online communication extend the varieties of identity and reputational damage that occur, and this clearly worries many young people.

Violent content

The high priority given to violent content in children's unprompted concerns about the internet is noteworthy given its relative neglect on the public policy agenda. It is also low on the research agenda, and many surveys of online risks have not included this risk. As shown in Figure 1, violence was mentioned more by boys and younger children, although girls and older teenagers also described disturbing experiences:

Showing images of physical violence, torture and suicide images. (Girl, 12, Slovenia)

I logged onto a game website and clicked onto action games and see Alien vs. Predator trailer. It was very blood and gory and it disturbed me. (Boy, 10, UK)

Everything about violence that can be seen on websites is not good for teenagers of my age. By that I mean violence against women and children and perverted humiliations and cruelty against people in general. (Girl, 14, Germany)

Smackdown games upset me, people fight too much. (Boy, 11, Turkey)

Those things that show other people's suffering or torment as a funny thing. (Boy, 14, Hungary)

The long-established tradition of research on children's fear responses to television (Cantor, 2003) revealed that children of all ages find certain imagery frightening, but what frightens them changes as they grow older: younger children are more upset by fictional violence in fairy tales and films, while adolescents are afraid of real threats (disasters, wars, hunger or real violence) depicted in the news (see also Nightingale et al., 2000; Van der Molen et al., 2002). However, the range of violence available online extends that seen on television (where few children complained of images of torture, suicide or violence against children).

Research on children's exposure to the news has shown that the factual nature and cultural importance of news makes the violence it includes all the more upsetting (Von Feilitzen, 2010). This is evident in children's concerns about factual images on the internet:

Some shocking news like terrorist attacks. (Boy, 12, Finland)

I have seen what life was like in Chernobyl. People were suffering from physical deformities. I was upset to see the pictures and it made me sad. (Girl, 9, France).

I was shocked seeing a starving African child who was going to die and a condor waiting to eat him. Also, news about soldiers who died while serving [in] the army, Palestine and Israel war scenes upset me very much. (Girl, 13, Turkey)

Such responses to the news pose a dilemma to those charged with child protection, since the news is important for young citizens to understand their world. Buckingham (1996) observes children's felt imperative to 'face up to reality' or 'face facts.' Lemish (2007: 33) suggests that disturbing television news facilitates 'a sense of social responsibility, civic awareness, empathy, compassion and ethical issues related to the pain and suffering of others'. Children's online comments on events such as the Iraq war, analysed by Carter and Messenger-Davies (2004), revealed young citizens' disappointment with news coverage and their frustration that journalists appeared to neglect them as audiences.

Rather than trying to prevent children seeing real violence in the news, one resolution is to manage the conditions of children's access to such content, depending on their maturity and circumstances. Here the emphasis should be on contextual explanation by parents or teachers so as to encourage thoughtful discussion and critical understanding. But where television news has traditionally been viewed in the family living room or, sometimes, at school, the internet increasingly affords a privatised context for news viewing which impedes convenient adult mediation of the experience.

The internet decontextualises violence not only by encouraging individual viewing but also by excerpting violent incidents from their textual and social context, reframing them as, simply, disgusting or horrifying images. Many children's accounts centre on distressing graphic clips of real yet decontextualised footage of accidents, abuse or death:

Awful videos of real-life car accidents. (Boy, 12, Slovenia)

I saw a video in which a little boy was hanging in a Ferris wheel and men were filming it. I was shocked because the men did not help the boy, instead they stopped the wheel and the boy fell down. (Girl, 15, Finland)

There are a lot of sites showing video clips with disgusting videos. A mate showed me once a video about an execution. It was not fun, but insane. I get scared. (Boy, 15, Sweden)

While children in this study had little opportunity to describe the circumstances in which they encountered such content, research on viewing violent imagery has pointed to a lively peer culture of testing how much can one take (Jerslev, 2001) or a curiosity about what the world contains outside the adult-imposed boundaries that constrain children (Sumiala and Tikka, 2011). One 11-year-old boy from Ireland gave a hint of these circumstances when he wrote: ‘Scary things – I saw something at my friend’s house and I can’t get it out of my head.’ As Nightingale et al. (2000: 21) found, children can take a ‘particular delight in describing the details of horrible images they had seen’. Goetz et al. (2005) add that, even in children’s happiest media-related fantasies, fear and threat often hover on the periphery, precisely because children are aware of their own vulnerabilities, although adults may brush these aside, preferring to avoid than to address them with children. It is thus noteworthy but unsurprising that what particularly upsets children are images that portray vulnerable victims – animals, disabled people and victims like themselves, i.e. children:

Animal cruelty, adults hitting kids. (Girl, 9, Denmark)

People sometimes upload things online such as animal cruelty and other content that is not human! I believe that this is really shocking. (Girl, 15, Netherlands)

Killing stories of all sorts; videos about torturing; it doesn’t matter whether animals or children are bullied/tortured, both are disgusting. (Boy, 11, Estonia)

Violence against children or animals; shocking photos or videos about poor countries. (Girl, 16, France)

I hate when I see animals being beaten, or people fighting with each other, or those scary pictures and bloody things. (Girl, 13, Hungary)

Although brief, these responses are eloquent in conveying children’s shock on seeing cruelty, humiliation and abuse, especially to children or animals. As Buckingham (2006: 283) argued in relation to television, while children develop coping strategies for the unwelcome feelings induced by fictional material, they often find it much harder to cope with non-fiction which cannot be dismissed as ‘made up’ and because ‘they are so powerless to intervene in issues that concern them’.

As with our previous observations on the over-simplified distinction between accidental and deliberate actions in relation to pornography and cyber-bullying, it seems inappropriate to blame children for taking part in the exchange of violent content. Research on television and other screen media urges recognition of children’s genuine desire to understand and take responsibility, while the internet affords an extremity of content, some of which is even beyond the comprehension of adults. Add to the mix the familiar but powerful pressure to join in with peers and belong to the group, and it is clear that many children are ill-prepared to avoid upsetting experiences.

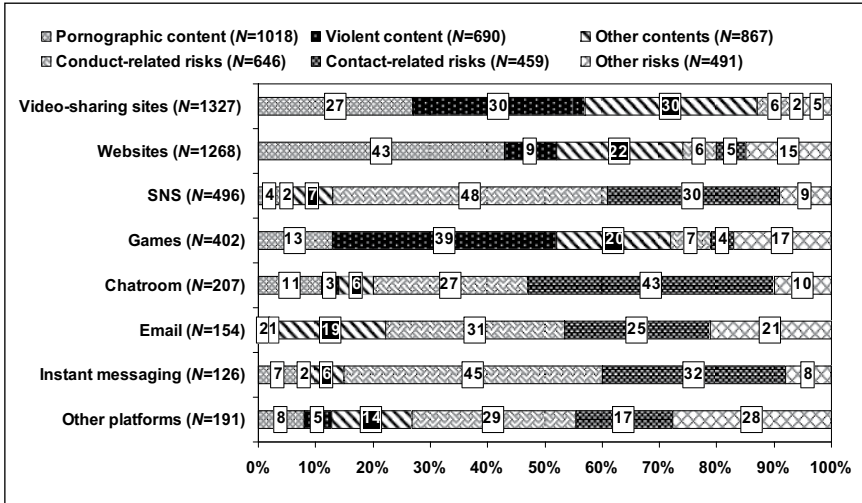


Figure 2. Which risks are associated with which platforms? (% of risk types ascribed to each platform).
 Base: 9- to 16-year-olds who mentioned a platform when describing online risks (N = 4171).

Mapping risks onto platforms

‘The internet’ is not a black box to children, and different sites and services have distinct affordances. Nearly half of the children (N = 4363) who mentioned online risks spontaneously linked these to a particular platform. Video-sharing sites such as YouTube or Redtube were mentioned most, by 32% of children who mentioned any platform in describing online risks that bother their age group. Websites came second (29%), followed by social networking sites (13%) and then games (10%).

Further analysis revealed that platforms are risk specific (see Figure 2). The risks associated with video-sharing websites were mostly violent (30%), pornographic (27%) and other content risks (30%):

YouTube. Terrible videos. Terrible images. (Boy, 13, UK)

Videos where older teenagers mistreat disabled children and upload the video on YouTube. (Girl, 9, Italy)

These websites on YouTube that show sex or violence, they should not be allowed to upload these materials on the internet, or also videos with young people humiliating peers or bully them. (Boy, 15, Italy)

Risks associated with social networking sites such as Facebook were mostly linked to conduct (48% of risks linked to social networking) and contact risks (30%). Risks associated with websites primarily concerned pornography (43%), while those associated with games were primarily violent content (39%) and those associated with chatrooms were linked to contact (43%) and conduct (27%).

Boys reported more concerns about video-sharing sites (34% boys who mentioned a platform vs 29% girls) or games on the internet (12% boys vs 8% girls). Girls were more concerned about social networking sites (15% girls who mentioned a platform vs 10% boys). This gender difference is statistically significant (chi-square [7]= 63.24; $p < 0.001$; Kramer's $V = 0.12$; $N = 4356$), pointing to a familiar pattern whereby boys engage more with mass entertainment (videos, games) while girls engage more with interpersonal communication (Livingstone et al., 2012).

Conclusions

The present portrait of children's concerns about the internet suggests that policy-oriented research should not simply take its lead from the public policy agenda but, additionally, it should attend to children's concerns expressed in their own words. As documented in this article, these reveal, first, a considerable diversity of online risks; second, the subtle nature of the circumstances that occasion such risks; and third, the importance of violent imagery, apparently overlooked by public policy and research.

Content analysis of violence on YouTube shows that it is more realistic in its consequences and more negative in its context compared with television violence (Weaver et al., 2012). Shifman (2011) emphasises the ordinariness of the people portrayed in YouTube clips as part of their appeal. Possibly, exposure to violence generates civic or compassionate responses (Buckingham, 1996; Carter and Messenger-Davies, 2004; Højjer, 2006). But it is also possible that the outcome is emotional arousal to violence (Bushman et al., 2010), emotional desensitisation to pain in others (Björkqvist, 1985) and violent behavioural scripts for everyday events (Huesmann and Kirwil, 2007). Since these contrasting claims have been explored mainly for television, film and games, research on violent images online is now needed.

In internet safety debates, most attention centres on sexual and peer-to-peer risks such as 'stranger danger', cyber-bullying and 'sexting'. It is possible that, although the history of audio-visual media policy has long prioritised concerns over children and violence, the interactivity of so-called Web 2.0 has obscured the still common use of the internet to exchange mass-produced and mass-circulated content. We are not aware, for example, of advice on how to deal with violent content in the 'top tips' disseminated to parents and children by child protection agencies. Although YouTube has installed a simple content filter at the bottom of its home page, there appears to be little effort to promote or evaluate this tool. Nor do parental filters work for user-generated or user-distributed content on peer-to-peer sites such as YouTube (except by blocking the site entirely or by requiring users to flag any problematic clip individually; Cybion Srl and Stiftung Digitale Chancen, 2012).

Also unknown is how the social context of exposure shapes children's emotional responses. We have shown that children can fear or be disgusted by what they find online. But policy interventions do not, as yet, address these emotions in efforts to raise awareness or teach digital literacy and safety. While noting children's shock or upset in response to violent content, we have also problematised any simple conclusion that, as a result, their access should be restricted, since one reason children explore online is precisely to explore experiences often denied to them offline. This takes them into often

ambiguous situations characterised by what boyd (2008) terms ‘collapsed contexts’, in which risky content is interwoven into a youthful peer culture of sharing and daring as links are passed from child to child, discussed ritualistically the following day, and used in social judgements about group belonging or exclusion.

In conclusion, we recommend that future research attends carefully to the voices of children and young people in relation to online risk, both because their concerns differ from those of adults and because children’s accounts offer valuable insights into the conditions of their distress. It is important to examine the social practices associated with the children’s peer exchange of decontextualised pornographic and violent clips on YouTube and other video-sharing sites (as is underway for adults: Burgess and Green, 2009; Haridakis and Hanson, 2009). The combination of unfamiliar technological affordances, uncertain online norms and offline peer pressure makes it hazardous to judge children’s intentions or responsibility in simple terms, and protective interventions from adults require care. It may also be proposed that children should be consulted regarding possible solutions (Bucht and Edström, 2012; Nightingale et al., 2000), for their views in this regard also cannot be taken for granted:

I think that the fewer things a kid knows about the internet, the greater the risks. (Girl, 12, Greece)

In my opinion all sites are welcome; if you don’t like a certain site, you simply avoid it. We are different people, with different tastes. So, on the internet there should be all sorts of websites, with ample, diverse content, for all tastes. (Boy, 14, Romania)

It depends what age you are. If you are around 10 years then it might be gross to suddenly end up on a porn site. When you are a little older and end up in a porn site, you do not care so much and just cross it out instead. (Girl, 15, Norway)

Excessive violence, porn, commercial products that are totally annoying; I think the European Union should use its power at computer level to block websites. (Boy, 15, Portugal)

Blocking some beneficial websites that we are happy to use (such as video and music sharing sites) and the difficulty in accessing whatever we want on internet bothers us ... the availability of the things that make us unhappy bothers us as well. (Boy, 15, Turkey)

As the quotations above illustrate, their views here as in other matters are refreshingly diverse. They recognise that the context of exposure matters, as does the maturity of the child. They can be as censorious or libertarian as adults. And they are aware that insofar as risks mean their internet use is restricted, this brings costs in terms of online opportunities.

Acknowledgement

The authors thank members of the EU Kids Online network for their work in coding and translating the qualitative material analysed here, and for their feedback on earlier versions of this article.

Funding

This article draws on the work of the EU Kids Online network funded by the EC (DG Information Society) Safer Internet Programme (project code SIP-KEP-321803); see www.eukidsonline.net.

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