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CHILDREN AND ONLINE RISK:
Powerless victims or resourceful participants?

Research on the risks associated with children's use of the internet often aims to inform policies of risk prevention. Yet paralleling the effort to map the nature and extent of online risk is a growing unease that the goal of risk prevention tends to support an over-protective, risk-averse culture that restricts the freedom of online exploration that society encourages for children in other spheres. It is central to adolescence that teenagers learn to anticipate and cope with risk – in short, to become resilient. In this article, we inquire into children and teenagers' responses after they have experienced online content or contact risks. Pan-European findings show that especially in Northern European countries with high internet access, parental perception of likelihood of online risk to their child is negatively associated with their perceived ability to cope. A comparison of representative surveys conducted among children in three relatively 'high risk' countries (Norway, Ireland and the United Kingdom) found that although the frequency of exposure to perceived online risks, especially content risks, is fairly high, most children adopt positive (e.g. seek help from friends) or, more commonly, neutral (e.g. ignoring the experience) strategies to cope, although a minority exacerbate the risks (e.g. passing risky content on to friends). Most strategies tend to exclude adult involvement. Significant differences in both risk and coping are found by gender and age across these countries, pointing to different styles of youthful risk management.

Keywords   Children; internet; risk; parenting; coping; resilience

Accompanying the rapid rise in domestic internet use during the past decade, concerns about children's exposure to risk of harm online have become a familiar part of the public discourse in Western societies. While children are popularly perceived as techno-savvy users and innovators in terms of education, communication and creativity (although see Facer & Furlong, 2001), when it comes to risks they are instead portrayed as potential victims in an Aristotelian state of tabula rasa, vulnerable to the wide array of harmful contents and contacts afforded by the internet. This presents policy makers, parents and teachers with a dilemma: on the one hand, there is considerable government and industry-led impetus behind the further promotion of the internet, but on the other hand, enthusiasm for the benefits this may facilitate is tempered by anxieties regarding the prospects for minimizing the attendant risks.

Attempts to resolve this dilemma by either ignoring the risks or, conversely, by restricting children's online opportunities (whether by limiting their access to the internet or by controlling their activities) are unsatisfactory. More subtle solutions are required, especially since research suggests that those who experience more online opportunities also experience more risks, and that reducing online risk may restrict online opportunities (Livingstone & Helsper, 2009). Solutions may include state or industry self-regulation, awareness-raising among parents, teacher training or – the focus of this article – supporting and guiding the coping responses of children themselves.

Deliberations regarding online risk echo wider debates regarding risk in childhood (Jackson & Scott, 1999). Defining risk as 'the possibility that human actions or events lead to consequences that harm aspects of things that human beings value' (Klinke & Renn, 2002, p. 1071), distinguishes risk assessment (calculating risk probability and magnitude), risk evaluation (determining the acceptability of a given risk) and risk management (the process of reducing risks to a level deemed tolerable by society). All three processes are important, but when it comes to children, risk management is impeded by apparent public reluctance to tolerate any risk whatsoever.

Dissenting voices are beginning to counter this risk-averse approach, so that while one set of pressures (media panics, growing litigation, conservative regulations) pushes society towards a highly protective, even over-protective approach to children, there is growing resistance to the restrictions this imposes on children's autonomy, privacy and freedoms (Gill, 2007; Madge & Barker, 2007). Theorized in terms of 'resilience to risk', this approach argues that children must learn for themselves how to navigate the wider world, including learning from their mistakes and recovering from accidents, for 'resilience can only develop through exposure to risk or to stress' (Coleman & Hagell, 2007, p. 15).

'Coping' refers to behaviour that protects people from being psychologically harmed by risky experiences (Pearlin & Schooler, 1978). Little is known of how teenagers cope with online risk, although see Frydenberg et al. (2003) and Coleman and Hagell (2007) on adolescent coping, Reyna and Farley (2006) on adolescents' anticipation of and responses to risk, and Spitzberg and Hoobler (2002) for adult coping with online risk. In relation to television, Buckingham (1996) argued that children can be shocked, fearful or upset but they learn to cope by choosing content that is a little but not much too old for them and by realizing that their emotional responses do not last. However, Cantor (2002) found that children's fear responses to television can persist into adulthood, with continued nightmares, avoidance practices and anxiety. Qualitative work suggests that some shrug off experiences that for others are distressing, although it may be that some are more reluctant to report distress (Nightingale, Dickenson, & Griff, 2000).

While claims about television may apply to the internet, online risks are more diverse and the associated harms are potentially more extreme; moreover children are less amenable to parental mediation, being widely regarded as the online 'experts' (Livingstone, 2008). Questions regarding children's responses to online risk are increasingly pertinent. To what degree can children themselves be expected to cope with risk on the internet? How much exposure to risk, under what circumstances, might engender resilience rather than harm? How do adolescents make decisions in relation to anticipated risks (Reyna & Farley, 2006)? And when should adults intervene, given adolescents' tendency towards risk-taking activities (Hope, 2007; Slater, 2003)? To date, such questions have been barely addressed.

Rather, following mass adoption of the internet in homes across Europe, North America and many parts of Asia, empirical research has mainly focused on the identification and possible prevention of risk – mapping what different children do online and whether and when they are exposed to various kinds of risk (Staksrud, Livingstone, & Haddon, 2007). A number of studies are prominent in this tradition: UK Children Go Online (Livingstone & Bober, 2004), Eurobarometer (2006), the Safety, Awareness, Facts and Tools (SAFT) 2003 and 2006 surveys (Staksrud, 2005; Staksrud, 2008b), the Youth Internet Safety Survey of 2000 and 2006 (Finkelhor, Mitchell, & Wolak, 2000; Wolak, Mitchell, & Finkelhor, 2006) and the Young Canadians in a WiredWorld survey, conducted in 2001 and 2005 (ERIN Research Inc., 2005; Media Awareness Network, 2001) (see also Australian Broadcasting Authority & NetAlert Ltd, 2005; Lenhart, 2007; Liau, Khoo, & Ang, 2005; Smith, 2007).

In this article, we review the nature and incidence of online risk before focusing on the new challenge of children's coping. We then compare findings from the SAFT and UKCGO projects conducted in Norway, Ireland and the UK, setting these in the context of pan-European findings to ask what children do after exposure to risk. Specifically, two research questions are explored in relation to a variety of content and contact risks: (1) how do children feel and (2) what do children do having encountered online risks?

What risks do which children encounter online?

By tackling some difficult issues of research ethics and design (Lobe, Livingstone, & Haddon, 2007), researchers over the past decade have achieved three main tasks: an analysis of the landscape of online risk; a scoping of risk incidence by age and gender; and a collaboration with policy makers and safety awareness initiatives to translate evidence into policy outcomes. Research has made less progress in addressing the difficult but important relation between risk (measured through surveys of children's risky experiences) and harm (e.g. measured through clinical or criminal reports (Millwood Hargrave & Livingstone, 2009)). Nor has it examined how children respond to risky experiences.

Notwithstanding definitional debates, online risks are generally taken to include a heterogeneous set of intended and unintended experiences which increase the likelihood of harm to the internet user: these include encountering pornographic, self-harm, violent, racist or hateful contents online, inappropriate or potentially harmful contact via grooming[1] or harassment, and, attracting recent attention, problematic conduct among peers such as bullying, 'happy slapping' or privacy invasions. One may distinguish content risks (where the child is a recipient of unwelcome or inappropriate mass communication), contact risks (where the child participates in risky peer or personal communication), and conduct risks (where the child acts themselves to contribute to risky content or contact). Risks can be further categorized in terms of the motivations of those who originate online information or

communication, resulting in the classification shown in Table 1 (Hasebrink, Livingstone, & Haddon, 2008).

Table 1: A classification of online risks to children

	Commercial	Aggressive	Sexual	Values
Content - *child as recipient*	Advertising, spam, sponsorship	Violent/ hateful content	Pornographic or unwelcome sexual content	Racism, biased or misleading info/ advice (e.g. drugs)
Contact - *child as participant*	Tracking/ harvesting personal info	Being bullied, stalked or harassed	Meeting strangers, being groomed	Self-harm, unwelcome persuasion
Conduct - *child as actor*	Gambling, hacking, illegal downloads	Bullying or harassing another	Creating and uploading porn material	Providing advice e.g. suicide/ pro-anorexic chat

Source: EU Kids Online (Hasebrink et al, 2008)

This usefully organizes the available research evidence on the incidence of risky experiences (although it does not wholly satisfactorily distinguish risks from opportunities in the sense that meeting new people, or exploring intimate experiences, may be perceived as opportunity by children but a risk by parents). Bearing in mind differences in the measures used, since different countries have conducted research in different ways, the EU Kids Online network[2] reviewed over 500 research projects conducted recently in 21 European countries, generating a broad picture of the experiences of online teenagers3[3] (having found little research on younger children) (Hasebrink, et al., 2008): .

- *Giving out personal information*: while not strictly speaking a risk, this is a likely precondition for many of the risks shown in Table 1 and is reported by half of online teens (with national variations spanning 13% - 91% of teenagers);
- *Seeing pornography*: around 4 in 10 across Europe (ranging from 25% - 80%, doubtless depending on definitions);
- *Seeing violent or hateful content*: around 1 in 3 (fairly consistent cross-nationally);
- *Being bullied/harassed/stalked*: around 1 in 5 or 6 (higher in few countries);
- *Receiving unwanted sexual comments*: around 1 in 10 teens in Germany, Ireland, Portugal; around 1 in 3 or 4 in Iceland, Norway, Sweden and the UK; rising to 1 in 2 in Poland;
- *Meeting an online contact offline*: around 9% (1 in 11) online teens in most countries, rising to 1 in 5 in the Czech Republic, Poland and Sweden;

After the risks associated with personal disclosure, content-related risks appear the most common – especially exposure to unwelcome or inappropriate sexual or aggressive content (though commercial and value-based content risks have been little researched). Contact risks vary in incidence, with bullying fairly commonplace, sexual harassment less common and, potentially most risky but least common, meeting online contacts ('strangers') offline.

Undoubtedly, there is scope to contest both the definition and measurement of online risk; still, the emerging consensus is that the internet affords significant risk of harm to children and young people, with evidence that 15–20 per cent of online teens have felt distress or discomfort or threatened on the internet. Similar findings to those found in Europe also exist in the USA. A national survey of 10–17-yearolds in 2006 found one in three had been exposed to unwanted sexual content, onein three communicated online with people they had not met offline, one in seven had received an unwanted sexual solicitation, and 9 per cent had been distressed by exposure to unwanted sexual material (Wolak, et al., 2006).

Not all children encounter risk online to the same degree, and socio-demographic factors make a difference. Both the UKCGO and SAFT surveys found that older teenagers were more likely than younger ones to meet online friends offline, while boys and middle class teenagers were more likely to disclose personal information online (Livingstone & Helsper, 2007; Staksrud, forthcoming-a; see also Mitchell et al 2007). Internet usage matters: the UKCGO survey found that those who used the internet more (in time spent and range of uses), and those who were more technically skilled, experienced a greater range of online risks (Livingstone & Helsper, 2009). The SAFT survey found that late starters (who began using the internet after the age of twelve) or those with more limited experience online were more at risk of harm from people they arranged offline meetings with (Staksrud, forthcoming-a).

Least researched is the possibility that psychological and family factors matter. Children's social difficulties, psychological depression and/or aggressive practices may increase their chance of online risk (Ybarra, Mitchell, Finkelhor, & Wolak, 2007). Those motivated to compensate for lack of social relations offline by forming new online relationships are more likely to seek new contacts (Peter, Valkenburg, & Schouten, 2006). Those with lower selfesteem or life satisfaction, and possibly those with poorer relations with their parents, also encounter more online risks (Livingstone & Helsper, 2007). If the research agenda is to encompass questions of online risk management as well as risk prevention, the risk factors and protective factors that shape children's lives require investigation.

From risk avoidance to risk management

What happens after the pornographic, violent or gory content has been accessed? Or after a face-to-face meeting following an online encounter? Or after receiving a frightening or harassing message online? The EU Kids Online review found qualitative evidence that children are developing strategies to cope with online risks, gaining confidence in their use. But, how these are applied and whether they are effective, remains unknown (Hasebrink, et al., 2008). The Eurobarometer survey conducted in 2005/06 provides pan-European answers to two questions asked of parents/carers whose child (0–17 years) uses the internet: has their child ever encountered harmful or illegal content on the internet; and do they think their child knows what to do if a situation on the internet makes them feel uncomfortable? Treating the latter as a rough indication of parents' judgment regarding their child's ability to cope, we

note that nearly one third say their child has encountered harmful content on the internet and two thirds say their child knows what to do in such situations (see Table 2).

Table 2[4]: Parents' perceptions of their child's encounter with harmful/illegal content and their ability to cope. Base: parents/carers whose child under 18 uses the internet.[5]

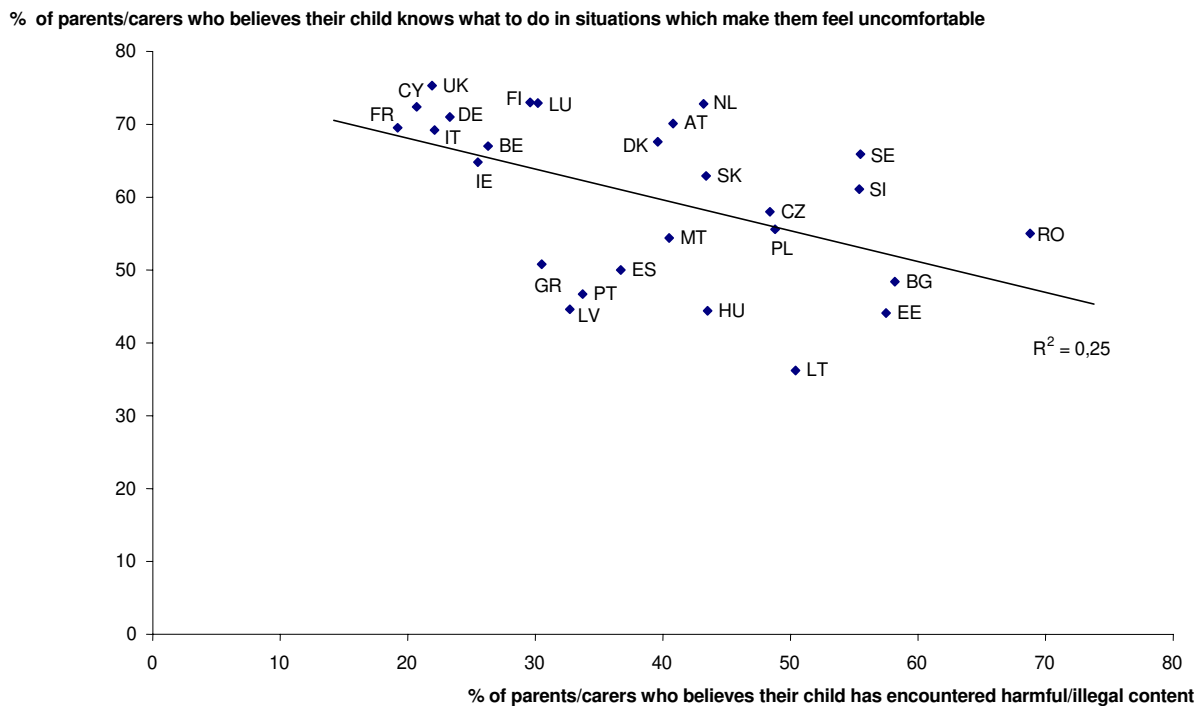|	National level of internet use, from total Euro-barometer base (%)	Child uses the internet (%)	Child has encountered harmful/illegal content (%)	Child knows what to do in situations which make them feel uncomfortable (%)	Correlation between columns 1 and 2, calculated within each country (r)*
EU 25	**49**	**50**	**30.8**	**66.0**	**-.02**
Bulgaria	17	29	58.2	48.4	.12
Estonia	58	67	57.5	44.1	-.15*
Sweden	82	64	55.5	65.9	-.25*
Slovenia	50	58	55.4	61.1	-.02
Poland	36	47	48.8	55.6	.02
Czech Republic	45	57	48.4	58.0	.02
Netherlands	85	68	43.2	72.8	-.25*
Austria	51	52	40.8	70.1	.19*
Denmark	75	71	39.6	67.6	-.15*
Spain	41	36	36.7	50.0	.13
Portugal	27	38	33.7	46.7	.16
Greece	24	26	30.5	50.8	.07
Belgium	59	62	26.3	67.0	-.20*
Ireland	49	42	25.5	64.8	.13
Germany	54	47	23.3	71.0	.03
Italy	40	39	22.1	69.2	-.10
United Kingdom	56	65	21.9	75.3	-.09
Cyprus	30	32	20.7	72.4	.32*
France	53	52	19.2	69.5	.00

Source: Eurobarometer 64.4 – Special No. 250: Safer Internet, Dec. 2005-Jan. 2006.
* Statistically significant correlations (p<.05).

In a number of countries – mainly Northern European countries with high internet access – perceived likelihood of online risk is negatively associated with perceived ability to cope (Belgium, Denmark, Estonia, Netherlands, Sweden). This suggests that where parents judge their child to encounter little risk, they need not worry about their coping; but where they judge risk to be higher, they are concerned that their child may not cope. In two small, Southern countries (Cyprus, Austria) the correlation is positive, suggesting that children who encounter more risk are judged to cope better than those who encounter less. It seems plausible that in the first set of countries, increasing internet use is seen, whether as a result

of personal experience or awareness-raising, to generate risks that children are unprepared for. The finding for the second pair of countries may be regarded complacently, though equally it may indicate a low awareness of online risk in countries relatively new to the internet.

Figure 1: Parents' perceptions of their child's encounter with harmful/illegal content and their ability to cope, by country. Base: parents/carers whose child under 18 uses the internet (%)

% of parents/carers who believes their child knows what to do in situations which make them feel uncomfortable

% of parents/carers who believes their child has encountered harmful/illegal content

Source: Eurobarometer 64.4 – Special No. 250: Safer Internet, Dec. 2005-Jan. 2006.
R^2 = 25% (r=-0.52, p<.05).

This interpretation is supported by the negative association between the two variables obtained when country (rather than individual) data are correlated. Figure 1 shows that the higher the percentage of parents in a country who claim their child has encountered harmful content, the lower the estimated ability of children in that country to cope with these potentially harmful encounters, and vice versa. Differences in the absolute level of risk perceived in each country suggest a different country grouping: possibly, in countries perceived by parents to pose lower risk (Belgium, Cyprus, France, Germany, Ireland, Italy, UK[6]), children have indeed learned to cope. But it seems more likely that in lower risk countries, parents are less aware of children's need to cope and so overestimate their resilience. Similarly in countries perceived to be at higher risk (Romania, Estonia and Bulgaria, followed by Sweden, Slovenia, Lithuania, Poland, Czech Republic), children may really be less able to cope or, more likely, in higher risk countries, parents are more aware of their children's need to cope.

The foregoing suggests that the incidence of risk and the ability to cope are culturally shaped. Intriguingly, while policy initiatives tend to be often directed at those relatively new to the internet, different initiatives are clearly required once the population becomes more

experienced online. In what follows, we examine children's responses to online risk in three countries where the evidence of risky activities (as opposed to parental perceptions) suggests risks are fairly high (Hasebrink, et al., 2008). The three countries were chosen for pragmatic reasons: although there are many surveys regarding children's online risk experiences, only in Ireland, Norway and the UK did we find surveys that followed up on questions about perceived risk with questions posed to children about their responses, coping or otherwise.5 Broadly comparable questions were asked in each country, enabling the examination of both common and distinctive

patterns of coping within and across countries in relation to two research

questions, which were operationalized as follows.

> RQ1: How do children feel about online risk (operationalized as seeing pornography or violent or gruesome material online, being bullied or harassed online, or meeting someone in real life who they first met online).
>
> RQ2: What do children do having encountered online risk (operationalized aswhat they do after seeing pornography or violent or gruesome material online, after being bullied or harassed online, or having gone to an offline meeting with an online contact).

Data collection

The SAFT and UKCGO projects investigated children's use, activities and risks online. The SAFT project initially surveyed 9–16-year-olds in Denmark, Iceland, Ireland, Norway and Sweden in 2003 (Staksrud, 2008b). Its questionnaire informed the design of the UKCGO project, which surveyed 1,511 9–19-year-olds in the UK in 2004 (Livingstone & Bober, 2004). The SAFT survey was replicated in Ireland and Norway in 2006. For the present analysis, the datasets from Ireland (2006)[7], Norway (2006) and the UK (2004) were reanalysed for 9–16-year-olds who used the internet once per week or more frequently (see Table 3).[8]

Table 3: Samples interviewed in each country, by age and gender
(Filter: uses the internet at least once per week)

	Ireland	**Norway**	**UK**
Number of interviews	**604**	**792**	**952**
Sample (%) by age			
9-12 years	45%	47%	47%
13-16 years	54%	52%	53%
Sample (%) by age and gender			
Boys 9-12 years	21%	24%	24%
Boys 13-16 years	28%	26%	26%

Girls 9-12 years	24%	23%	22%
Girls 13-16 years	26%	26%	27%

Methods of data collection in the two projects differed: the SAFT project collected the data by self-completion surveys in schools, supervised by a professional market research interviewer and with no teacher or parent present; the UKCGO project collected the data via in-home computer-assisted interviews conducted by a professional market research interviewer, but with self-completion portions of the survey for sensitive questions concerning online risks. All data have been weighted in accordance with population estimates. The survey questionnaires can be found at www.eukidsonline.net.

Researching children and risk requires care in terms of research ethics, as the questions concern activities and experiences that might be perceived as 'wrong', 'illegal', 'embarrassing' or 'private'. Both projects conducted considerable qualitative work and pilot testing before framing the survey questions to check the appropriateness of question wording. The SAFT project obtained informed consent for the children to participate from both school head teachers and parents. The UKCGO survey sought written consent from parents and children (for those under 18 years old).

Since national surveys were conducted under somewhat different conditions, in different languages and with different samples, no statistical comparisons are made, and we comment only on sizeable percentage differences (5 per cent or more). Note also that since multiple response options were permitted for many questions, we focus on relative values (e.g. responses of older vs. younger children) and absolute percentages should be interpreted with caution, especially as our focus is on matters that are far from easy to examine with a survey questionnaire.

Comparative analysis of risk findings

How much exposure to online risk do children in the three countries report? Figure 2 shows that, consistent with the overall European findings, content risks are more common than contact risks, with exposure to online pornography being more common than to violent or gruesome material. Seeing online pornography, whether intentionally or accidentally, is experienced by a majority of teenagers – around two-thirds of those in Norway and the UK. Contact risks are less common: a substantial minority have experienced online threats or bullying; only a small minority have been to an (offline) meeting with a contact that they first met online, though this rises to one in five Norwegian teenagers.

Each risk is reported more by teenagers (13–16 years old) than younger children (9–12 years old). Gender differences are also striking, with content risks higher for boys than girls, though this is not the case for contact risks where gender differences appear small; contrary to publicity regarding the grooming of girls, it seems that older boys are more likely to meet online contacts offline.
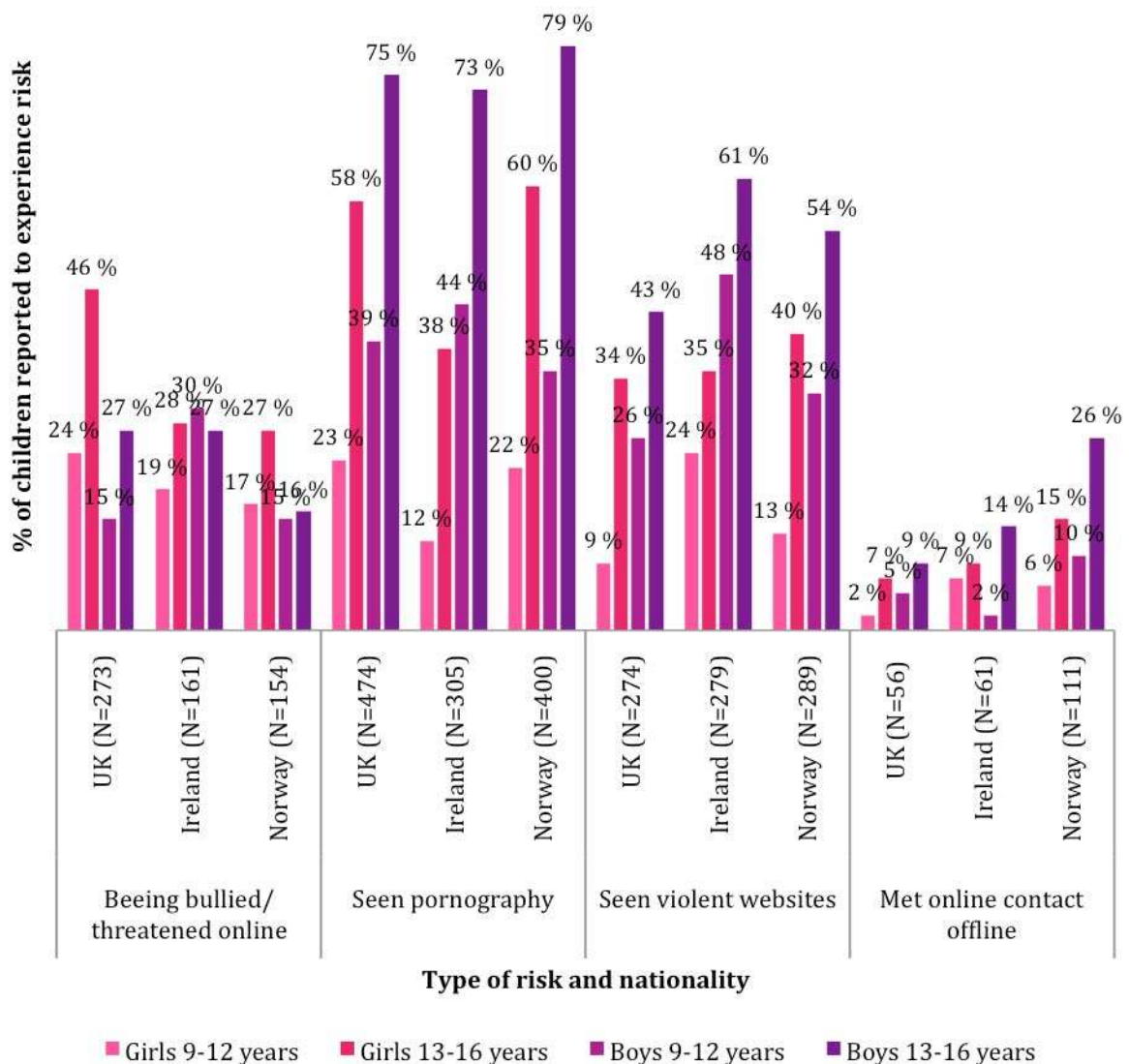
Figure 2: Overall risk exposure among child internet users in UK, Ireland, and Norway, by gender and age

In Norway and, especially, the UK, older girls seem more often bullied online. Ireland was lowest overall on exposure to pornography, although the younger Irish boys were most likely (44 per cent) and younger Irish girls were the least likely (12 per cent) to have seen pornography online. Irish children seem more likely to have seen online violence, overall, with few differences between Norway and the UK on content risks. However, meeting online contacts offline is notably higher in Norway, especially among teenagers (at 21 per cent), compared with Ireland (11 per cent of teenagers) and the UK (8 per cent of teenagers). While cross-national differences in incidence of risk clearly merit further investigation, our purpose here is to examine children's responses to risk.

Responses to content risks

How do children feel about seeing pornography and violent or gruesome material online? Among those who have seen online pornography, responses varied by country, age and gender, as shown in Figure 3. The response option, 'I didn't think too much about it', may

indicate low perceived risk: this is more common among older teenagers, especially boys, and among British children. The options, 'I thought it was funny' and 'I thought it was cool', suggest a risk-taking attitude which may reflect either resilience or defiance: neither was as commonly used, especially by younger children and girls, though Irish children, especially the younger ones, seem particularly defiant (or 'naughty'), with the younger girls thinking pornography funny (possibly out of embarrassment) and the older teenage boys thinking it cool. The remaining two options, 'It upset me' and 'I wish I hadn't seen it', suggest high perceived risk or even actual harm: though fairly uncommon, the second option was more endorsed by younger children and by girls. Further, 'It upset me' was more common in the UK, especially among girls, and 'I wish I hadn't seen it' was more common in Norway, especially among younger children. Some of the greatest variation, interestingly, is among the younger girls: the Irish girls thought it funny (52 per cent), the British girls were upset (52 per cent) and the Norwegian girls wished they hadn't seen it (48 per cent): possibly these strong reactions reflect equivalent repugnance framed differently according to culture.
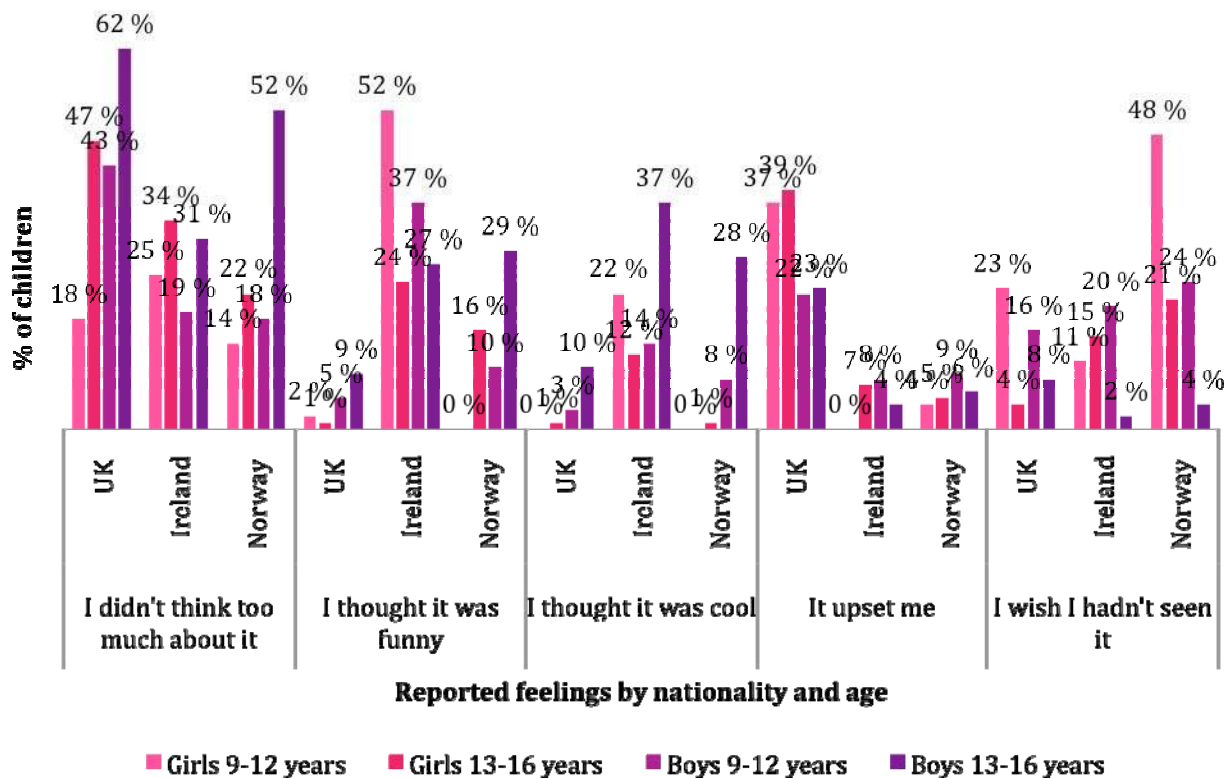

Figure 3: Reported feelings about seeing pornography, in UK, Ireland and Norway, by age and gender (among internet users who have seen pornography online)[1]

The link between perceived risk and coping or risk management was not straightforward, partly because interpreting the findings requires judgements – possibly

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[1] Slightly different wordings were used in the UK questionnaire: instead of "it upset me", they answered "I thought it was disgusting"; instead of "I thought it was cool", they answered "I thought it was interesting"; and instead of "I thought it was funny", they answered "I enjoyed it".

contentious – about the value of children's responses. Figure 4 suggests that a positive coping response ('I ignored it') was the most common (as with the above 'I didn't think too much about it'), especially among British children. It was also more common among teenagers, which we interpret either in terms of a higher response rate on this question among teenagers (note that younger children did not select many of the options offered) or, possibly, among those children who saw it, it was interesting in some way (compared with the teens for whom, as we saw above, might be less shocking).

What we might term 'negative' responses – those that extend rather than diminish the risk, such as 'I bookmarked it' and 'I sent the URL to some of my friends' – were much less common overall, though a little higher among Irish children and Norwegian teenagers. The proportion of young Irish girls who bookmarked pornography follows from their apparent amusement at seeing it (above), albeit in a way we find difficult to explain: possibly a Catholic culture creates a specific and taboo interest in such material that intrigues young girls. Bookmarking and, especially, sending the address of porn sites to peers is, clearly, a teenage boys' practice, consistent with their finding such content 'cool' and revealing a youth subculture that crosses national boundaries.

The pro-active coping response, at least for those concerned about encountering pornography, is to tell someone: this is the response promoted by safety awareness initiatives. Limited success is evident from the high likelihood of younger children telling a parent or teacher in each country (11 per cent in the UK, 13 per cent in Norway, 19 per cent in Ireland). Norwegian and, especially, Irish children are far more likely to tell a friend than British children, leaving the British overall the least likely to tell anyone, it seems.
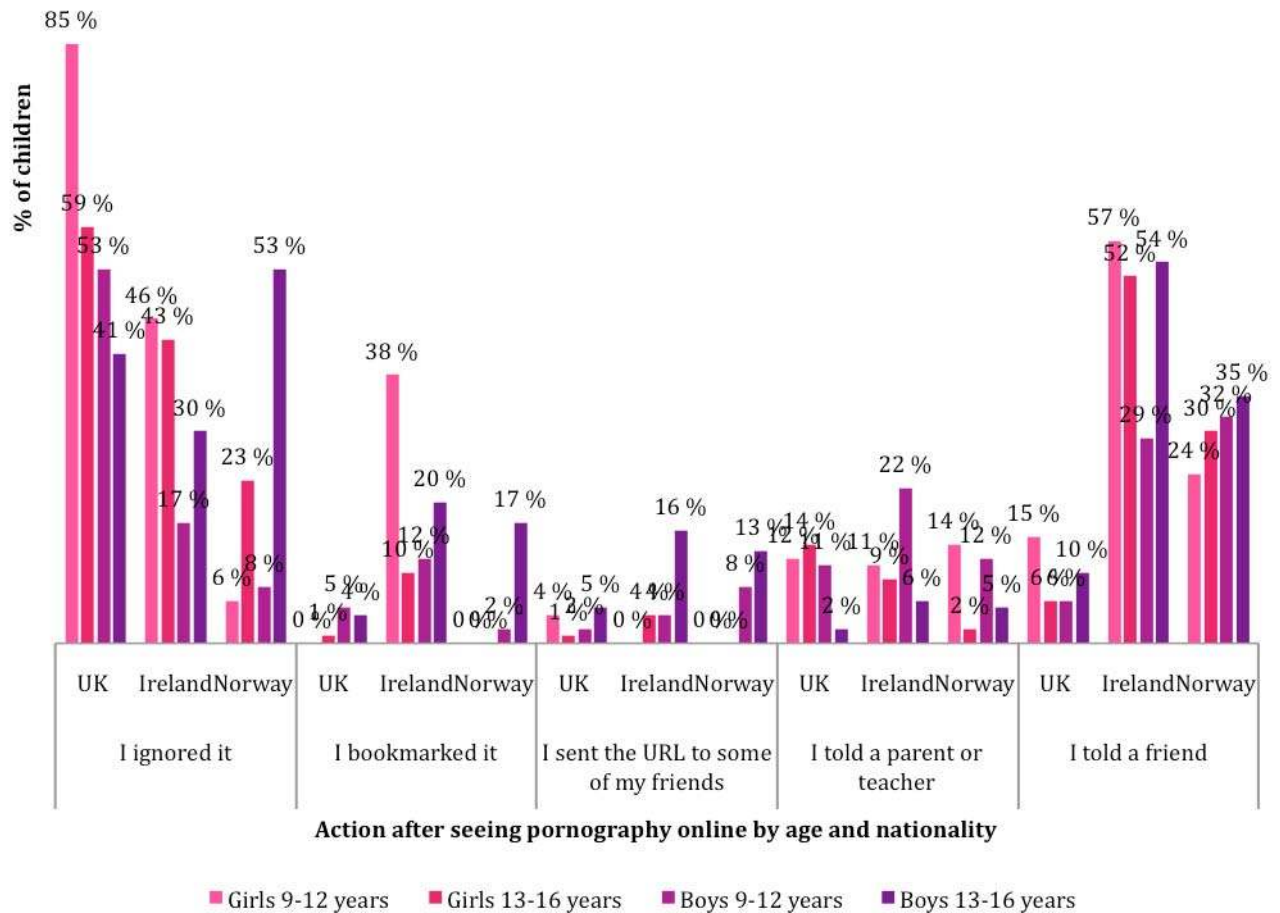
Figure 4: Reported actions after seeing pornography in UK, Ireland and Norway, by age (among internet users who have seen pornography online)[2]

Although the overall incidence of seeing violence or gruesome content online is lower than for pornography, children's responses follow a broadly similar pattern (see Figure 5).When asked how they felt, 'I didn't think too much about it' is the most common response, with fewer finding it funny, cool or upsetting. Again, British girls are more likely to find such content upsetting, Irish children to find it funny or cool, and Norwegian children to wish they had never seen it, confirming the suggestion above that these represent culturally different framings to, possibly, a similar underlying reaction of negativity or embarrassment.

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[2] Slightly different wordings were used in the UK questionnaire: instead of "I ignored it", they answered "I left the site immediately without looking at it"; instead of "I bookmarked it", they answered "I went back to it another time"; instead of "I sent the URL to some of my friends", they answered "I sent the website address to a friend"
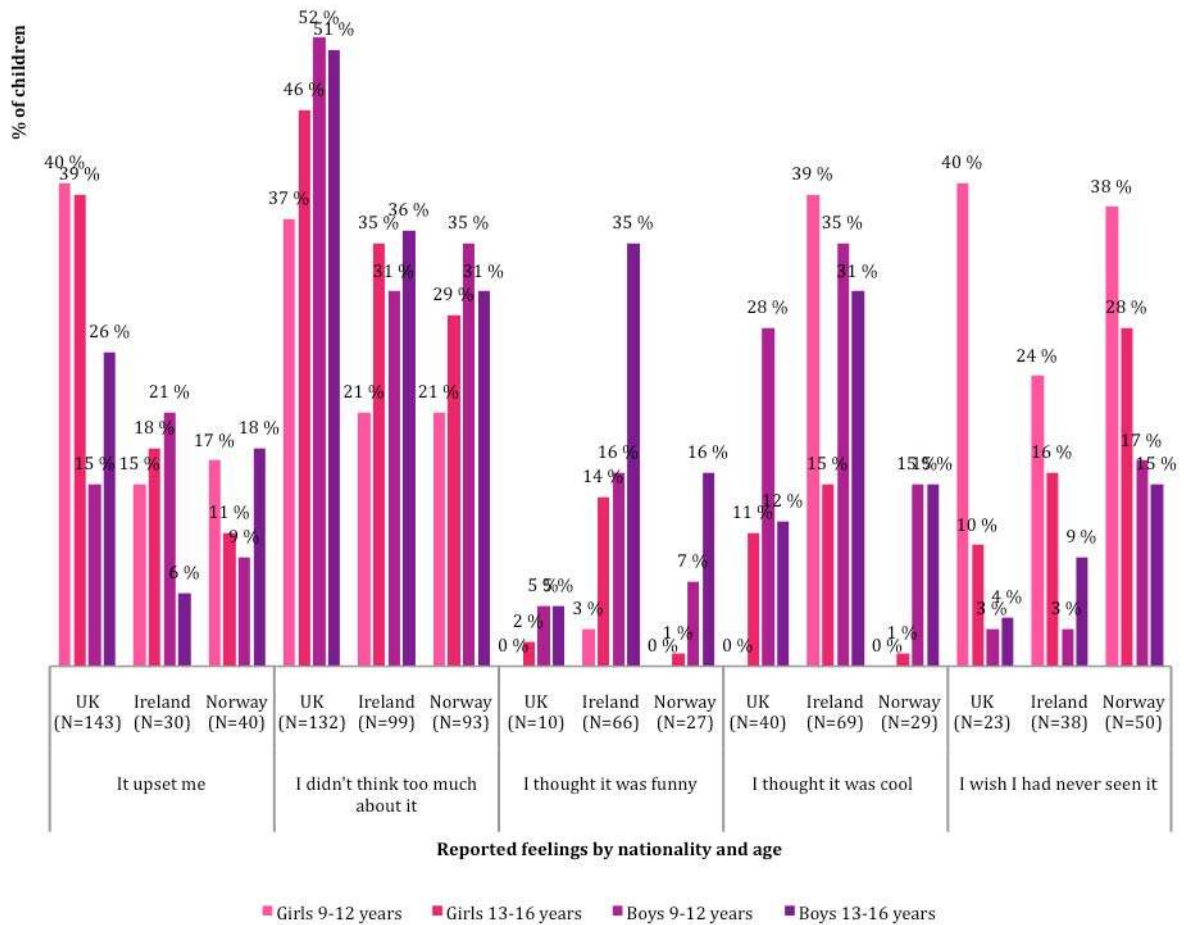
Figure 5: Reported feelings about seeing violent or gruesome material online, in UK, Ireland and Norway, by age and gender (among internet users who have seen violent or gruesome material online)[3]

Figure 6 shows what children do after seeing violent content online. While ignoring the content is also here the most common course of action, the overall number of respondents who follow it is significantly lower than for pornography. This is especially apparent in the UK, where for the youngest group the numbers are halved. Compared to the responses for seeing pornography, the youngest girls are more likely to tell their parents or teachers. The boys are less likely to talk to adults, similar to the responses for pornography. A distinct difference between the countries is seen in the type of content shared, where Norwegian and Irish children are more prone to sharing pornography than violence, while their British peers to a higher degree share violence than pornography, either by telling a friend or sending the URL. Violent content is also bookmarked to a larger degree, except with the youngest Irish girls who tend to bookmark pornography, while none of their Norwegian or British peers do the same.

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[3] Slightly different wordings were used in the UK questionnaire: instead of "it upset me", they answered "I thought it was disgusting"; instead of "I thought it was funny", they answered "I enjoyed it"; instead of "I thought it was cool", they answered "I thought it was interesting".
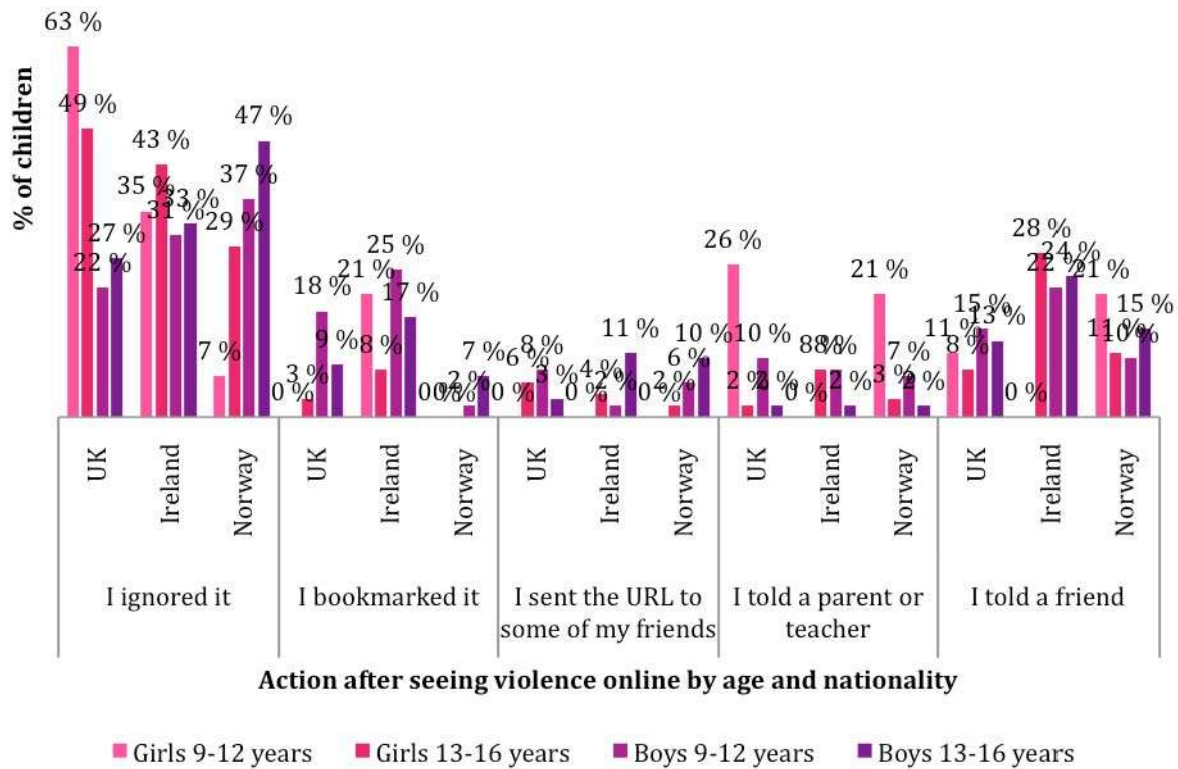
Figure 6: Reported actions after seeing violent or gruesome material online, in UK, Ireland and Norway, by age and gender (among internet users who have seen violent or gruesome material online)[4]

Responses to contact risks

How do children respond to being bullied or harassed online, and after meeting someone in real life? As was seen in Figure 2, contact risks are less common than content risks. Of the children having received a message that bothered or frightened them, deleting the message is common in most groups (see Figure 7). Trying to block the sender or telling a friend are the next most common, suggesting children can be pro-active in coping with bullying. Younger girls across all three countries are the ones most likely to confide in an adult. Norwegian and UK children are more likely to tell a friend, suggesting a stronger peer-oriented coping strategy than the Irish children, with the exception of the younger Irish boys. British children are far more likely to reply to the message received; however this result should be interpreted

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[4] Slightly different wordings were used in the UK questionnaire: instead of "I ignored it", they answered "I left it immediately without looking at it"; instead of "I bookmarked it", they answered "I went back to it another time"; instead of "I sent the URL to some of my friends", they answered "I sent the website address to a friend"; `instead of "I thought it was cool", they answered "I thought it was interesting".

with caution, as different methods were used to collect this response in the two surveys (Figure 7).
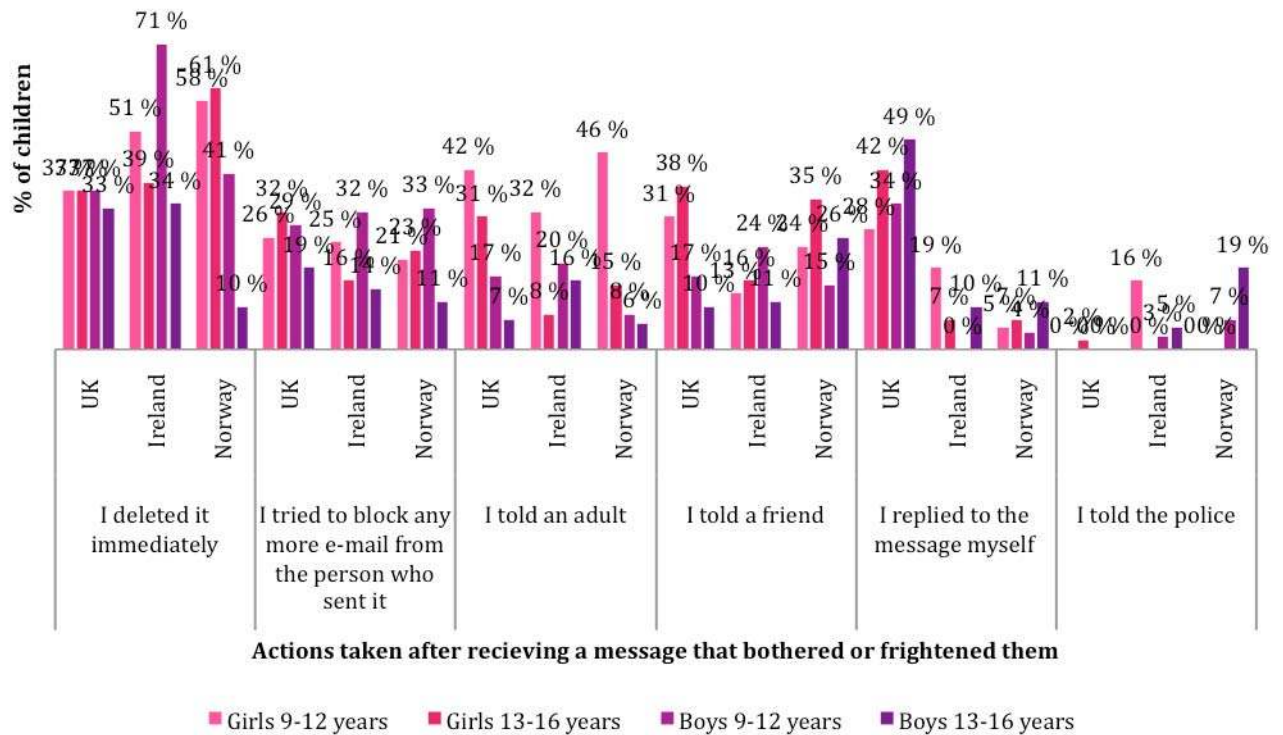

Figure 7: Reported actions after receiving a message that bothered or frightened them in UK, Ireland and Norway, by age and gender (among internet users who have received such a message) [5]

As regards going to face-to-face meetings with people, Figure 8 shows a range of responses from children in each country. Most children will consider the meetings either entertaining or merely 'OK'. Many will have brought a parent (especially in the UK) or a friend, in line with common safety advice. Contrary to the often vocalized public fear of young girls being especially at risk in such meetings, younger girls do not report any negative experiences. Verbal abuse is reported most by younger Irish boys and older Irish girls. It is a concern that physical abuse is reported by the older Irish children (11 per cent of the boys and 25 per cent of the girls), and by the Norwegian boys (5 per cent of younger and 4 per cent of older) and older girls (2 per cent), although these respondent numbers are very low.

[5] In Ireland and Norway children were asked if they had ever received an e-mail that bothered or frightened them and, then, what they did *the last time* this happened. In the UK, they were asked "Has someone ever said nasty or hurtful things to you?" by email, chat, instant messaging etc and, then, what they did the last time this happened. By comparison with the SAFT questionnaire, in the UK instead of "I deleted it immediately" they answered "I deleted it straight away", instead of "I tried to block any more e-mail from the person who sent it" they answered "I tried to block messages from the person", instead of "I told an adult" they answered "I told a parent", or "I told a teacher" - combined in the analysis. For the option "I replied to the message", the UK figure includes both children answering "I replied to the message to ask them to stop" and "I replied to the message to send nasty comments back".
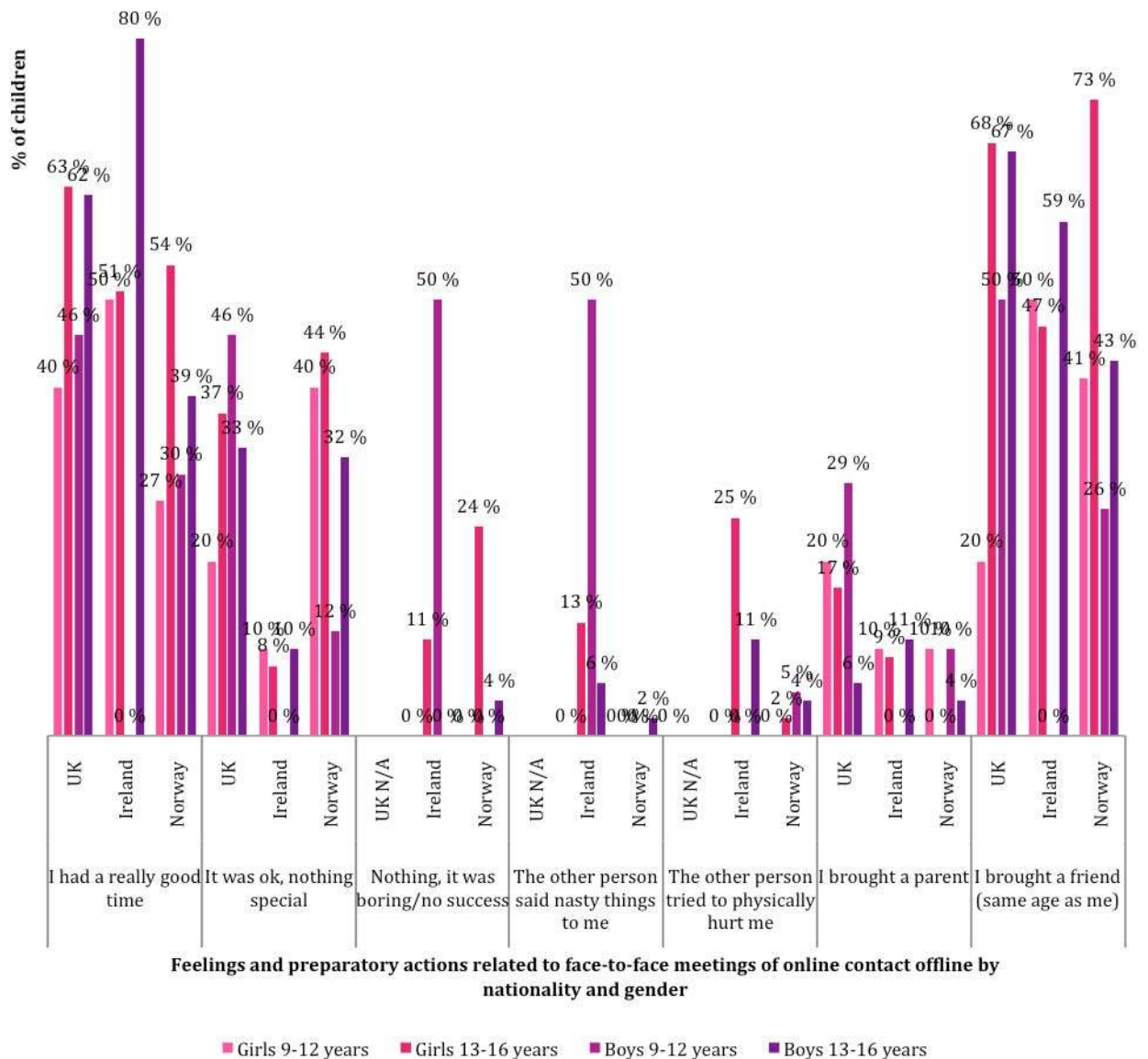
Figure 8: Responses to face-to-face meeting with an online contact in UK, Ireland and Norway, by age and gender (among internet users who have met an online contact offline)[6]

Discussion and conclusions

Both the pan-European and the national findings suggest that children are encountering a fair degree of online risk, inadvertently or otherwise, presumably varying considerably in severity. The same rank ordering of risk incidence holds in all countries, with pornography the most common, then violent content, then bullying and then meetings. This may appear reassuring,

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[6] Slightly different wordings were used in the UK questionnaire: instead of "Nothing, it was boring/no success", they answered "I didn't enjoy it", and instead of "The other person said nasty things to me", they answered "The other person upset me". The option "the other person tried to physically hurt me" was not asked in the UK.

since it is the less frequent contact risks that carry a higher potential for harm, compared with the commonplace content risks. We note, further, that across all risk types, children are relatively sanguine about the consequences – pornography and violent content is typically ignored, bullying messages are deleted and face-to-face meetings with online contacts mostly result in 'a good time'. This suggests that safety messages – both passive (ignore, delete, etc.) and active (tell someone, take a friend to a meeting) are effectively reaching many children.

However, the signs of distress are also spread across risk types – for example, a sizeable minority of British children exposed to pornography were upset, while Norwegian children wished they hadn't seen it; further, a small number of children had a bad experience on meeting an online contact. There are promising indications, meriting further research, that emotional responses to online risk are translated into appropriate actions – for example, younger girls were not only the most concerned about seeing online violence but they were also the most likely to tell an adult (in Norway and Britain). On the other hand, children's evident reluctance to tell an adult rather than a friend, as well as the demographic and national variation in responses, points to a range of factors that shape coping responses, some of which may impede appropriate self-protective actions.

For the three countries analysed here, demographic differences are more striking than cross-national differences. Teenagers encounter more risks than younger children, boys encounter more content risks and, contrary to popular perception, go to more meetings, than girls, while older girls may be more often bullied online. However, younger girls report stronger responses to online risk experiences, mainly negative (though the Irish responses are puzzling) and, therefore, they may respond constructively to safety messages targeted at them. Teenagers, and boys, appear to pay less attention to online risk, suggesting they may be harder to reach in terms of safety advice – an issue since they encounter more risk. Teenage boys are also most likely to perpetuate risk in, one may judge, an irresponsible manner – they bookmark pornographic or violence links and send them on to friends, for example.

Intriguingly, each country stands out for a different risk – Ireland is higher for violent content and lower for pornography, Norway is highest for meeting online contacts offline, the UK is highest, at least among teenage girls, for bullying. This pattern of findings is, perhaps curiously, seemingly unrelated to media coverage: a content analysis of media coverage of children and online risks in twelve European countries finds the UK (and to a lesser extent Ireland) to give more publicity to online sexual content than Norway, while Norway appears more concerned about bullying (Haddon & Stald, in prep). Another possibility is that online multiplayer games are particularly well established among Norwegian boys (Kaare, 2005) and that their high rate of face-to-face meetings is because they are meeting up with their 'clan' or group or going to 'the Gathering', an annual event with thousands of participants.

These three countries differ in other ways too. Based on a combination of Eurobarometer and SAFT findings, Hasebrink et al. (2008) classified Norway as a high child use/high parent use country, the UK as high child use/medium parent use, and Ireland as medium child use/medium parent use.[9] This suggests that the gap between children's online experiences and parental awareness or readiness to mediate may be greatest in the UK, while in Ireland, both parents and children may be less experienced or skilled online, compared with Norway. Yet British children seem no less likely to tell an adult of a risky experience, albeit that this is a minority response among children generally (though British children are less likely to tell a friend, interestingly). Possibly the lesser experience of the

internet in Ireland may account for some of the odd responses from Irish children – bookmarking risky content, finding it cool or funny.

Other cross-national differences may be more intangible, raising issues yet to be explored empirically. For example, a comparison of tragic events in Norway and the UK reveals subtle cultural constructions of risk and responsibility. The murder of two-year-old James Bulger in the UK in 1993 became 'a watershed in the history of youth justice and in our attitudes towards children' (Jewkes, 2004, p. 91). One year later, a five-year-old Norwegian girl, Silje Marie Redergard, was killed by four other children while playing. However, in the UK, the two child perpetrators were publicly labelled as evil monsters and their parents too were blamed (Barker & Petley, 2001), but the Norwegian children were instead treated as themselves victims (Freeman, 1997). The implications of these and similar cultural factors are little understood, and probably would Benefit from qualitative rather than survey research.

This article has shown that children's ability to cope with online risk varies across types of risks, cultures, gender and age. It seems plausible that their coping strategies depend on how they themselves regard the risk. While parents might see children's exposure to pornography online as problematic, many children will perceive it as 'cool', 'fun' or not think too much about it. likewise, while face-to-face meetings with online contacts often is labelled as 'dangerous' and linked to paedophile activities, for most children such meetings result in a positive experience with other peers. It will therefore surely be ineffective to advise children to avoid such meetings altogether: they will hear from peers that there are no problems, and so discredit safety advice. That children are far more likely to turn to friends than parents or teachers, that some children compound rather than avoid online risk, and that demographically and culturally different groups appear to respond in different ways, are all factors that make the effort to develop children's resilience a difficult, albeit also an important, task.

The present analysis has, we hope, made the best use of survey findings which, nonetheless, were not strictly designed for cross-national comparison and which both struggled to ask reliable questions of children regarding emotional responses and coping actions. The methodological requirements for future research in this field pose challenges regarding research ethics, design and measurement which, though difficult, should now be attempted (Lobe, et al., 2007). Further cross-national research is also required that broadens the range of online risks investigated, some of which may concern 'approved' content (e.g. the news), about other values (e.g. racist or pro-anorexia content) and, occasioning increasing concern, commercial content (from covert advertising to gambling sites).

We conclude, in concurrence with the conclusions of the public consultation held by the European Commission's Safer Internet plus programme (2007, p. 3) that risk and safety should be addressed in the context of the 'overwhelmingly positive potential of the internet' and that since 'a risk free internet for children and young people is an illusion', more attention should be paid to children's risk avoidance and their strategies for coping with risk and, indeed, harm. To put it another way, if no risk to children is considered acceptable, risk management is reduced to preventing them from enjoying precisely the freedom of online exploration that, in other spheres – notably, education, self-expression and civic participation – society seeks to encourage. But if instead we recognize that risky encounters are necessary to the development of resilience, the challenge shifts from that of risk prevention to that of balancing tolerable levels of risk against desirable freedoms of opportunity. In support of this growing resilience, parents may need a closer understanding of their child's perception of online risks and appropriate coping strategies (Livingstone & Bober, 2006; Nikken &

Jansz, 2006; Staksrud, 2008a; Wilson, Peebles, Hardy, & Litt, 2006). Thus we invite further research on the consequences of risk, as understood and negotiated between parents and children.

Acknowledgements

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Notes

[1] 'Grooming' in the Internet context refers to online activities performed by adults seeking to establish trust-based relationships with the child with the intention of future sexual abuse (see e.g. Staksrud forthcoming a).

[2] See www.eukidsonline.net (last accessed 23 August 2008).

[3] Several risks have not yet been researched comparatively, including self harm, anorexia, race hate, commercial exploitation or suicide.

[4] Thanks to Uwe Hasebrink and Panayiota Tsatsou for calculating the figures in this table and in Figure 1; see Hasebrink et al. (2008).

[5] Questions posed directly to children are important. Both SAFT and UKCGO projects found large discrepancies between parents' and children's understanding of children's internet use ((Livingstone & Bober, 2006; Staksrud, forthcoming-b).

[6] As Hasebrink et al. (2008) note, other evidence contradicts this classification insofar as it positions the UK as a high risk country.

[7] The replication of the SAFT survey in Ireland 2006 was called the 'Webwise 2006 Survey of Children's Use of the Internet'.

[8] Although collected in different years, the collection of data took place at the same time of the year, in January and February.

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[9] According to Eurostat, internet diffusion occurred earlier in Norway than in the UK and Ireland and, in 2007 reached 87 per cent of adults (78 per cent of households) in Norway, 75 per cent of adults (67 per cent of households) in the UK and 61 per cent of adults (57 per cent of households) in Ireland. See Eurostat statistics at http://epp.eurostat.ec.europa.eu/ (last accessed 7 August 2008).