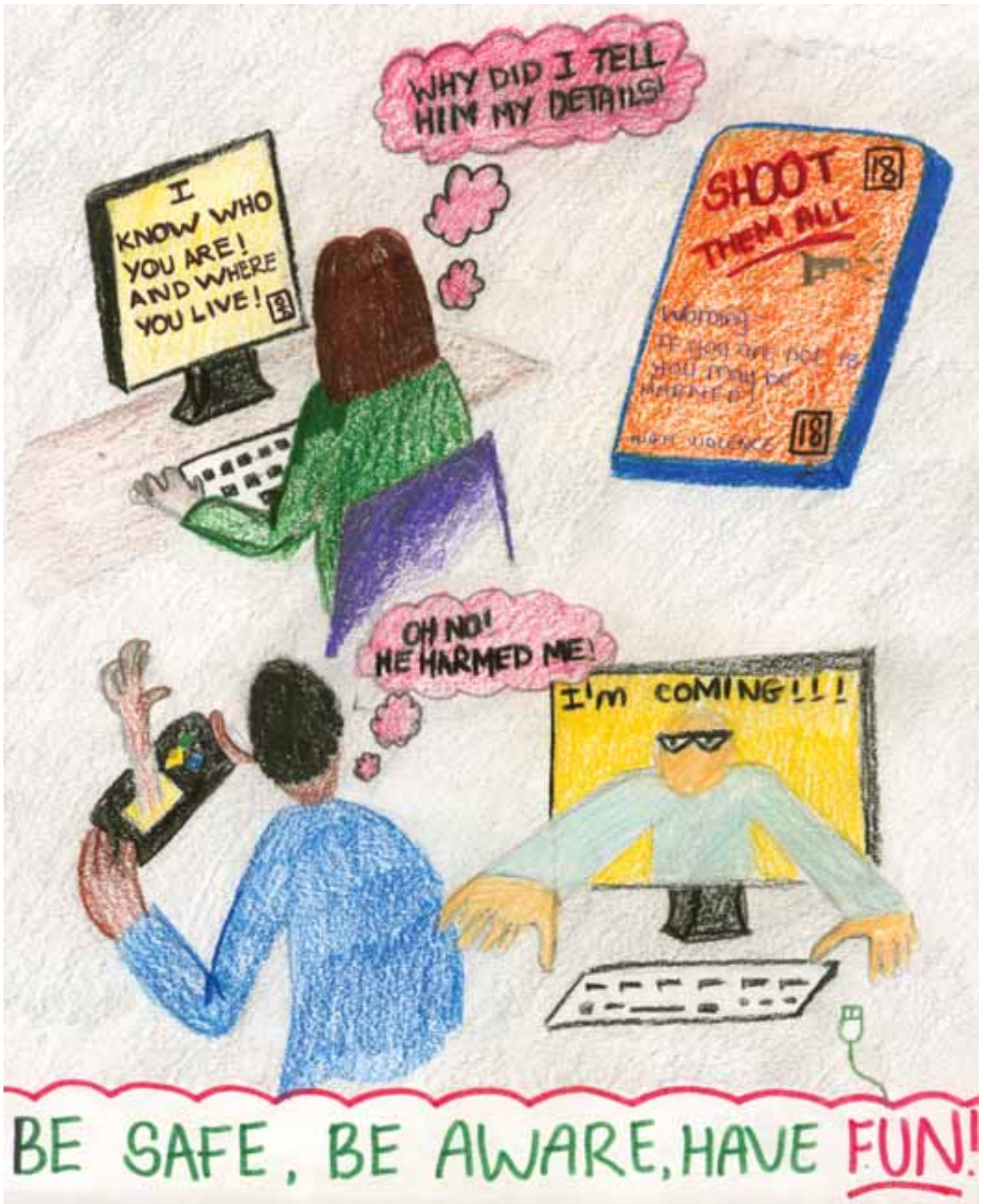# Safer Children in a Digital World

The Report of the Byron Review

Byron Review
Children and New Technology

Contents

Foreword

When I was asked by the Prime Minister to carry out an independent review of the risks children face from the internet and video games, I realised two things. First, how integral these new technologies have become to the lives of young people and second, how important it is that we educate ourselves about the benefits and dangers they bring.

As a clinical pyschologist specialising in child and adolescent mental health – and as the mother of two children – I wanted to understand how and why young people use the internet and video games.

Hardly a day goes by without a news report about children being brutalised and abused in the real world or its virtual counterpart. Some make links between what happens online or in a game, and what happens on the streets or at home.

These headlines have contributed to the climate of anxiety that surrounds new technology and created a fiercely polarised debate in which panic and fear often drown out evidence. The resultant clamour distracts from the real issue and leads to children being cast as victims rather than participants in these new, interactive technologies.

It quickly became apparent that there was a big difference between what concerned parents understand and what their technologically savvy children know. The rapid pace at which new media are evolving has left adults and children stranded either side of a generational digital divide. Put bluntly, the world of video games has come a long way since the early days of Pac Man. And while change and innovation are undoubtedly exciting, they can also be challenging or just plain scary.

But panic or no panic, the virtual world and the real world do contain risks, and children left to navigate a solo path through either, face many dangers.

The trouble is that although as adults we instinctively know how to protect our children offline, we often assume that their greater technological expertise will ensure they can look after themselves online. But knowledge is not the same as wisdom.

This review is about the needs of children and young people. It is about preserving their right to take the risks that form an inherent part of their development by enabling them to play video games and surf the net in a safe and informed way.

By listening to children and young people and putting them at the heart of this review – and by replacing emotion with evidence – I hope I have provided some very necessary focus to what is a very necessary debate.

Dr Tanya Byron
Consultant Clinical Psychologist
March 2008

Executive Summary

- The internet and video games are very popular with children and young people and offer a range of opportunities for fun, learning and development.

- But there are concerns over potentially inappropriate material, which range from content (e.g. violence) through to contact and conduct of children in the digital world.

- Debates and research in this area can be highly polarised and charged with emotion.

- Having considered the evidence I believe we need to move from a discussion about the media 'causing' harm to one which focuses on children and young people, what they bring to technology and how we can use our understanding of how they develop to empower them to manage risks and make the digital world safer.

- There is a generational digital divide which means that parents do not necessarily feel equipped to help their children in this space – which can lead to fear and a sense of helplessness. This can be compounded by a risk-averse culture where we are inclined to keep our children 'indoors' despite their developmental needs to socialise and take risks.

- While children are confident with the technology, they are still developing critical evaluation skills and need our help to make wise decisions.

- In relation to the internet we need a shared culture of responsibility with families, industry, government and others in the public and third sectors all playing their part to reduce the availability of potentially harmful material, restrict access to it by children and to increase children's resilience.

- I propose that we seek to achieve gains in these three areas by having a national strategy for child internet safety which involves better self-regulation and better provision of information and education for children and families.

- In relation to video games, we need to improve on the systems already in place to help parents restrict children's access to games which are not suitable for their age.

- I propose that we seek to do that by reforming the classification system and pooling the efforts of the games industry, retailers, advertisers, console manufacturers and online gaming providers to raise awareness of what is in games and enable better enforcement.

- Children and young people need to be empowered to keep themselves safe – this isn't just about a top-down approach. Children will be children – pushing boundaries and taking risks. At a public swimming pool we have gates, put up signs, have lifeguards and shallow ends, but we also teach children how to swim.

Key Arguments and Recommendations

Context, evidence and a child-centred approach

1. Technology offers extraordinary opportunities for all of society including children and young people. The internet allows for global exploration which can also bring risks, often paralleling the offline world. Video gaming offers a range of exciting interactive experiences for children, however some of these are designed for adults. There is a generational digital divide between parents and children which means that many parents do not feel empowered to manage risks in the digital world in the same way that they do in the 'real' world.

2. New media are often met by public concern about their impact on society and anxiety and polarisation of the debate can lead to emotive calls for action. Indeed, children's use of the internet and video games has been seen by some as directly linked to violent and destructive behaviour in the young. There are also concerns about excessive use of these technologies by children at the expense of other activities and family interaction. As we increasingly keep our children at home because of fears for their safety outside – in what some see as a 'risk-averse culture' – they will play out their developmental drives to socialize and take risks in the digital world.

3. I have sought to put the child at the centre of this Review, both in terms of process and in the way that I have surveyed the evidence on the potential effects of the internet and video games on our children. The research debate on 'media effects', especially in relation to violent content in video games, is highly divided. On the internet, the technology and how children use it moves so fast that it is difficult for research to keep up. Of course, the harmful nature of illegal contact with children online is clear and this is being addressed by the work of Child Exploitation and Online Protection Centre (CEOP). But my remit has been to look at the grey areas – of legal, adult material such as 18 rated video games, and the risks to children online from a huge range of potentially harmful or inappropriate (but legal) content, contact with others and their own conduct. Chapter 1 explores some of context around this debate and sets out how I have approached defining the boundaries of this very broad remit.

4. The voices of children, young people and parents and the evidence of harm in relation to the internet and video games are discussed in detail in Chapters 3 and 6 respectively. Overall I have found that a search for direct cause and effect in this area is often too simplistic, not least because it would in many cases be unethical to do the necessary research. However, mixed research evidence on the actual harm from video games and use of the internet does not mean that the risks do not exist. To help us measure and manage those risks we need to focus on what the child brings to the technology and use our understanding of children's development to inform an approach that is based on the 'probability of risk' in different circumstances.

5. We need to take into account children's individual strengths and vulnerabilities, because the factors that can discriminate a 'beneficial' from a 'harmful' experience online and in video games will often be individual factors in the child. The very same content can be useful to a child at a certain point in their life and development and may be equally damaging to another child. That means focusing on the child, what we know about how children's brains develop, how they learn and how they change as they grow up. This is not

straightforward – while we can try to categorise children by age and gender there are vast individual differences that will impact on a child's experience when gaming or online, especially the wider context in which they have developed and in which they experience the technology. In Chapter 2 I discuss these influences in detail.

6.   Despite this diversity, evidence from the child development and brain development literature indicates that age-related factors and understanding the ways in which children learn can provide a very useful guide to identifying and managing potential risks to children when using the internet or playing video games. This is particularly because of the development of a key part of the brain throughout childhood – the frontal cortex, which mediates their experience and behaviour. This evidence helps us understand why age classifications on games matter. It also helps us appreciate ways in which children's experience of the internet can present risks. We can use these findings to help us navigate a practical and sensible approach to helping our children manage risks. This is no different to how we think about managing risk for children in the offline world, where decreasing supervision and monitoring occurs with age as we judge our children to be increasing in their competence to identify and manage risks. So, when we teach our children to cross the road safely we do it in stages:

●   We hold their hand when they cross the road.

●   We teach them to think, look both ways and then cross.

●   When we see that they are starting to understand this we let them cross walking beside us, without holding on to them.

●   Eventually we let them do it alone, maybe watching from a distance at first, but then unsupervised.

●   And throughout this, the environment supports them with signs and expected behaviour from others in the community – the green man, zebra crossings, speed limits and other responsible adults.

7.   Going online and playing video games may be more complex and diverse than crossing the road, but it illustrates that we should change the nature of our approach and interventions in the digital world with children's growing competencies and changing vulnerabilities.

The Internet (Chapters 3-5)

The evidence

8.   I have approached classification of the online risks to children in terms of content, contact and conduct in line with a model developed by the EU Kids Online project (Hasenbrink, Livingstone, et al, 2007), which reflects the changing nature of how the internet is used (so called 'Web 2.0'). Findings from the evidence set out in Chapter 3 show that the potential risks online are closely correlated with potential benefits. Data is beginning to reveal risks to young people in terms of increased exposure to sexually inappropriate content, contributions to negative beliefs and attitudes, stranger danger, cyberbullying and access to inappropriate content from sites which may promote harmful behaviours. Moreover, there are issues relating to commercial content and contact with young people.

9. What is clear is that while internet risks can reflect 'offline' concerns (e.g. bullying) the problems can be qualitatively different and sometimes have the potential to be more damaging. This is due to the nature of the internet, with its anonymity, ubiquity and communication potential. Research is beginning to reveal that people act differently on the internet and can alter their moral code, in part because of the lack of gate-keepers and the absence in some cases of the visual cues from others that we all use to moderate our interactions with each other. This is potentially more complex for children and young people who are still trying to establish the social rules of the offline world and lack the critical evaluation skills to either be able to interpret incoming information or make appropriate judgements about how to behave online.

Three strategic objectives for child safety on the internet

10. The internet is a vast many-to-many network which allows users to communicate freely with others all over the world – ideas can be spread quickly, cheaply and freely. One consequence of this is that there is no obvious single point at which editorial control can be exercised. This means that it is very difficult for national Governments to reduce the availability of harmful and inappropriate material. However, the majority of material accessed by internet users is hosted on a relatively small number of highly popular sites, the rest of it occupying a 'long tail' of less popular material. This means that we should focus our efforts on reducing the *availability* of harmful and inappropriate material in the most popular part of the internet.

11. Parents also have a key role to play in managing children's *access* to such material. There is a range of technical tools that can help parents do this (eg. safe search), but they only work effectively if users understand them. So restricting children's *access* to harmful and inappropriate material is not just a question of what industry can do to protect children (e.g. by developing better parental control software), but also of what parents can do to protect children (e.g. by setting up parental control software properly) and what children can do to protect themselves (e.g. by not giving out their contact details online).

12. Just like in the offline world, no amount of effort to reduce potential risks to children will eliminate those risks completely. We cannot make the internet completely safe. Because of this, we must also build children's *resilience* to the material to which they may be exposed so that they have the confidence and skills to navigate these new media waters more safely.

13. Through the right combination of successes against these three objectives – reducing availability, restricting access and increasing resilience to harmful and inappropriate material online – we *can* adequately manage the risks to children online. A number of efforts are already being made in pursuit of these objectives, and the strengths and weaknesses of these are explored in Chapter 3. But we need a more strategic approach if industry, families, government and others in the public and third sectors are going to work effectively together to help keep children safe.

14.   To deliver this reforms are needed in the structures of how government, industry and others engage on 'e-safety'. I am recommending:

- **A UK Council on Child Internet Safety, established by and reporting to the Prime Minister.**

- **That this Council should lead the development of a strategy with two core elements: better regulation – in the form, wherever possible, of voluntary codes of practice that industry can sign up to – and better information and education, where the role of government, law enforcement, schools and children's services will be key.**

- **That the Home Office and DCSF should chair the Council, with the roles of other Government departments, especially DCMS, properly reflected in working arrangements.**

- **That the Council should have a properly resourced cross-government secretariat to secure a joined-up Government approach to children and young peoples' safety online.**

- **That the Council should appoint an advisory group, with expertise in technology and child development, should listen to the voices of children, young people and parents and should have a sustained and rolling research programme to inform delivery.**

15.   Sometimes questions have been raised over how, or if, the criminal law applies to particular types of harmful and inappropriate material, and thus whether there is a role for law enforcement in the response. In areas such as websites that promote suicide, or where serious cyber-bullying occurs, there is some confusion about how offline laws and enforcement mechanisms can and should be applied to online activity. To assist the development of a coherent strategy, I recommend that:

- **The Council investigates where the law around harmful and inappropriate material could be usefully clarified (including suicide websites) and explores appropriate enforcement responses.**

The Internet: Specific Areas for Better Regulation (Chapter 4)

16.   I am also making recommendations to industry about specific tools and technology that can be promoted and developed to help support parents and children to manage online risks. These are suggestions for priority agenda items for the Council to pursue based on issues that have been raised during the course of my Review. A full rationale for each approach is set out in Chapter 4. My recommendations are:

- **That through the Council, the relevant industries should develop an independently monitored voluntary code of practice on the moderation of user generated content, including making specific commitments on take-down times.**

- **That through the Council, industry should ensure that computers sold for use in the home in the UK should have Kitemarked parental control software which takes parents through clear prompts and explanations to help set it up and that ISPs offer and advertise this prominently when users set up their connection.**

- **That through the Council, search providers should agree to make it obvious to users what level of search is on (e.g. safe or moderate) and give users the option to 'lock it' on and that every search engine have a clear link to child safety information and safe search settings on the front page of their website – this is particularly important as most parents are comfortable using search functions.**

- **That through the Council, the relevant industries should work with Government and the third sector to support vulnerable children and young people, especially in signposting users to support services when they discuss harmful behaviours, improving the skills of moderators and raising awareness of online risks with those who work with vulnerable children.**

- **That the advertising industries take steps to 'futureproof' the current system for regulating advertising to take account of new forms of online advertising which are currently out of remit and that Government reviews progress in this area in a year's time when it has the conclusions of the assessment of the impact of the commercial world on children's wellbeing.**

- **That the advertising industry works with media owners to raise awareness amongst advertisers of their obligations under the CAP Code to advertise responsibly to those under 18 on the internet and that the Council keeps this under review.**

17.   There are other areas where the Council should keep developments and potential responses under review: research and practice on age verification (which should not be seen as a 'silver bullet') and changing risks to children from mobile internet access as technology advances.

Better Information and Education about E-safety (Chapter 5)

18.   In addition to the specific recommendations that I have outlined for reducing availability of and restricting access to harmful and inappropriate material online, I believe that crucial and central to this issue is a strong commitment to changing behaviour through a sustained **information and education strategy.** This should focus on raising the knowledge, skills and understanding around e-safety of children, parents and other responsible adults. The underpinning evidence and an assessment of the wide-ranging activity already underway in this area are set out in Chapter 5.

19.   The internet is much used and valued by children, young people and parents, and the importance of the internet to the child increases with age. But parents are anxious about the generational digital divide in knowledge and experience about the internet. Higher skill levels mean children are increasingly confident about using the internet although they may not have the maturity and wider awareness to be safe online. Parents either underestimate or do not realise how often children and young people come across potentially harmful and inappropriate material on the internet and are often unsure about what they would do about it. There is evidence to suggest that the parents of children from more socially

disadvantaged backgrounds are less able to protect against the risks of the internet and require additional support.

20. As highlighted above, I am recommending that the national strategy for child internet safety which is to be developed by the UK Council for Child Internet Safety includes an information and education strategy. This would incorporate two strands of activity:

- **A properly funded public information and awareness campaign on child internet safety to change behaviour – which is led by Government but involves the full range of Council members.**

- **Sustainable education and children's services initiatives to improve the skills of children and their parents around e-safety.**

21. An effective social marketing campaign, combining blanket and targeted messages delivered through a wide range of media channels and involving children and young people themselves, is fundamental to the success of this strategy. It needs to be supported by mechanisms which pull together the huge range of information and advice currently provided which can overwhelm parents. To that end I also recommend that:

- **The Council works to develop an authoritative 'one stop shop' for child internet safety within the DirectGov information network, based on extensive research about what different groups of users want.**

22. One of the strongest messages I have recieved during my Review was about the role that schools and other services for children and families have to play in equipping children and their parents to stay safe online. To empower children and raise the skills of parents I make recommendations to Government in the following areas: delivering e-safety through the curriculum, providing teachers and the wider children's workforce with the skills and knowledge they need, reaching children and families through Extended Schools and taking steps to ensure that Ofsted holds the system to account on the quality of delivery in this area.

23. In relation to Schools I recommend:

- **That the Government ensures that e-safety best practice is well reflected in guidance and exemplar case studies across the curriculum as part of the support being provided to help schools to implement the new curriculum. I also recommend that the independent review of the primary curriculum being led by Sir Jim Rose should take full account of e-safety issues.**

- **That the TDA take steps to ensure that new teachers entering the profession are equipped with e-safety knowledge and skills. I recommend specific ways of achieving this, including revising the statutory ICT test, providing guidance for initial teacher training providers on how to assess trainee e-safety skills against the Professional Standards for Teachers and that TDA's survey of new teachers should include elements on e-safety.**

- **That the Government takes this opportunity to encourage school leaders and teachers to focus on e-safety by identifying it as a national priority for continuous professional development (CPD) of teachers and the wider school workforce**

- **That in all schools, action is taken at a whole-school level to ensure that e-safety is mainstreamed throughout the school's teaching, learning and other practices. In particular I recommend that:**

  – **Government should encourage schools to use Becta's self review framework assessment to drive continual improvement in schools' use of ICT including with regard to e-safety.**

  – **100% of schools should have Acceptable Use Policies that are regularly reviewed, monitored and agreed with parents and students. Guidance on this should be incorporated in Becta's revised self review framework.**

  – **that all schools and local children's services use an accredited filtering service.**

24.   To support the delivery of e-safety skills through Extended School services I recommend:

- **That Becta work with TDA and their partners to encourage and support schools to offer family learning courses in ICT, media literacy and e-safety so that parents and children can together gain a better understanding of these issues. TDA should take opportunities to collect and disseminate case studies on e-safety for extended activities and should work with Becta to make sure that after school ICT clubs and activities provide good coverage of the e-safety elements of the curriculum.**

- **That UK online centres should work with the Extended Schools to expand the provision of services and training for parents to achieve basic media literacy.**

25.   To ensure that the system delivers better outcomes for children in this area I recommend:

- **That Ofsted take steps to hold schools to account and provide Government with a detailed picture of schools performance on e-safety. In particular I recommend that:**

  – **Ofsted provide the Government with a snap shot report on school responses to question 4b of the SEF (regarding e-safety) by summer 2008.**

  – **Ofsted should comment on the state of internet safety training in schools as part of its forthcoming long report on ICT due for publication in 2008.**

  – **Ofsted uses its annual ICT school surveys to evaluate the extent to which schools teach learners to adopt safe and responsible practices in using new technology.**

- **That Ofsted undertake a thematic study on the teaching of e-safety and media literacy across what schools offer.**

- **If by 2011 evidence indicates widespread concerns in relation to school delivery of e-safety I recommend that Ofsted consider an assessment on performance in regard to e-safety in all school inspection reports.**

26. In addition to the school workforce a whole range of adults interact with children including youth workers, childcare workers, staff in Sure Start Children Centres, social workers and people running activities as part of Extended Schools. Therefore I recommend that:

- **Work to implement the Staying Safe Action Plan promotes Becta's LSCB toolkit.**

- **The Government's forthcoming Childrens Workforce Action Plan includes measures to ensure that people who work with children and young people have appropriate understanding of e-safety and how children and young people can be supported, and protected online.**

27. Those adults who work with particularly vulnerable children need to be familiar with the broad spectrum of online risks facing children, and how they can support and empower children and young people to address them. Hence I recommend that:

- **The Joint Chief Inspectors' Review of Safeguarding should provide a comprehensive assessment of children's internet safety across all children's services in its 2010 report to Government.**

28. While the extensive network of agencies that engage with children can play a key role in e-safety, parenting and the home environment remain paramount. Any comprehensive package of reform to minimise risks to children on the internet must help parents – who are in the best position to know and understand the individual differences between their children – develop their skills around e-safety. The evidence suggests that there is a need to put in place a range of policies and initiatives to increase the quality, availability and delivery of parenting support and family support regarding e-safety. In particular, this support should focus on measures that raise parents' e-skills and confidence to enable them to protect their children effectively themselves. I recommend that:

- **The National Academy of Parenting Practitioners (NAPP) creates a parent training module on e-safety, and includes elements on e-safety in existing courses on managing child behaviour.**

- **The Children's Plan also commits the Government to providing two parenting experts in every local authority. I recommend that provision is made to train all parenting experts on e-safety.**

Video Games (Chapters 6-8)

The evidence

29. Globally, the video games industry is thriving and the popularity of video gaming amongst children and young people is widespread. Games are diverse and developing rapidly, especially with the growth of online gaming and increasing convergence with other media, such as film. We need to take a sophisticated approach to classifying games and managing children's access to them in the context of this diversity and convergence. We also need to recognise that there is no single solution to the problem of children and young people playing games that might not be appropriate for them.

30.   Children see the benefits of games but also recognise that there are some risks. Parents are concerned about the opportunity costs related to their children's gaming habits and about the content of some games, but they are less aware of the potential risks of online gaming. Very few people are genuinely addicted to video games but lots of time spent playing can result in missed opportunities for other forms of development and socialisation.

31.   When it comes to content, parents want better information on which to base their decisions – but importantly, they do see it as their role because only they can take into account the characteristics of their children and the context in which they play. This is reinforced in the research evidence, where context and what the child brings to the gaming experience is key to understanding potential risks and harms.

32.   The evidence on video games is discussed in Chapter 6. There are some possible negative effects of violent content in games, but these only become 'harmful' when children present other risk factors:

- There is some evidence of short term aggression from playing violent video games but no studies of whether this leads to long term effects.

- There is a correlation between playing violent games and aggressive behaviour, but this is not evidence that one causes the other.

33.   However, we need to approach unequivocal claims of direct causes with caution – there is a strong body of ethnographic research which argues that context and the characteristics of each child will mediate the effects of playing video games. This means considering the media effects evidence in light of what we know about child development. We can use this to hypothesise about potential risks to children from playing some games, for example:

- Arousal brought on by some games can generate stress-like symptoms in children.

- Games are more likely to affect perceptions and expectations of the real world amongst younger children because of their less developed ability to distinguish between fact and fiction (due to the immaturity of the frontal cortex).

- The interactive nature of games may also have a more profound effect than some other media, again especially amongst younger children (e.g. up to around 12 years old) who tend to use narratives to develop their values and ideas and who learn through 'doing'.

34.   There are new risks presented in online gaming, many of which are similar to the potential risks to children of other internet use. These games offer new opportunities for social interaction between children and there are a number of potential benefits for children and young people from playing video games, including cognitive and educational gains and simply having fun. Interestingly the evidence to prove these benefits can be as contested as the evidence of negative effects.

Stepping up efforts to ensure age-appropriate gaming

35. A number of measures have already been put in place, particularly by the video games, retail, advertising and online industries, to help inform parents and children of the age-appropriateness of games and to restrict inappropriate access by children and young people. But more could be done, especially to simplify and reform the age classification system and to raise awareness of parents about age-ratings on games and the tools available to them to help control what their children play. These are explored in Chapter 7 on hard-copy games and Chapter 8 in relation to online gaming.

36. To help achieve this I am recommending:

- **Sustained, high profile and targeted efforts by industry to increase parents' understanding and use of age-ratings and controls on consoles.**

- **That the statutory requirement to age classify games be extended to include those receiving 12+ ratings.**

- **In the context of this Review, where my remit has been to consider the interests of children and young people I recommend a hybrid classification system in which:**
  - **BBFC logos are on the front of all games (i.e. 18,15,12,PG and U).**
  - **PEGI will continue to rate all 3+ and 7+ games and their equivalent logos (across all age ranges) will be on the back of all boxes.**

  There are other perspectives on the different possible approaches, and implementation of change will require full public consultation.

- **That the retail industry works together to develop and implement a more consistent approach to the sale of video games and better in-store information for parents, children and young people.**

- **That there should be focused efforts to monitor enforcement of the statutory age ratings at the point of sale.**

- **That the advertising and video games industries work together to improve guidance on the appropriate targeting and content of video games adverts in line with age classifications. I also make suggestions for specific measures they should consider.**

- **That console manufacturers work together to raise standards in parental controls on consoles, delivering clear and easy to use prompts and better information for parents on where console controls meet agreed standards.**

- **That the BBFC and PEGI work together to develop a joint approach to rating online games and driving up safety standards for children and young people in the games, under the auspices of the UK Council for Child Internet safety.**

37.   Alongside this work I am also clear that we need to ensure we get the most out of video games for children's learning and development, building on research into educational benefits. To this end I also recommend that:

●   **Government supports a dialogue between the games industry and the education sector to identify opportunities for the benefits of game-based learning to be evaluated in educational environments.**

Conclusion

38.   In the final chapter of the report I have set out an indicative timeline for the implementation of my recommendations and for future reviews of progress. Everyone has a role to play in empowering children to stay safe while they enjoy these new technologies, just as it is everyone's responsibility to keep children safe in the non-digital world. This new culture of responsibility spans parents, children and young people supported by Government, industry and the public and third sectors.

"Kids don't need protection we need guidance. If you protect us you are making us weaker we don't go through all the trial and error necessary to learn what we need to survive on our own…don't fight our battles for us just give us assistance when we need it."

(Children's Call for Evidence)

SURF DUDES ARE S.M.A.R.T.

Chapter 1

Setting the Scene

"I'm on the internet a lot. I have a lot of 'e-friends' and I think it's broadened my perspectives and my goals".

"I like meeting my friends online and chatting. I like getting my skills up. I learned to read on Runescape [a massive multi player online game …] I learned maths through working out the money and I learned map-reading".

(Children's Call for Evidence)

Terms of reference

1.1   The Prime Minister asked me to conduct this Review in order to help parents and their children get the best from new technologies while protecting children from inappropriate or harmful material. The objectives of the Review were:

- To undertake a review of the evidence on risks to children's safety and wellbeing of exposure to potentially harmful or inappropriate material on the internet and in video games.

- To assess the effectiveness and adequacy of existing measures to help prevent children from being exposed to such material and help parents understand and manage the risks of access to inappropriate content, and to make recommendations for improvements or additional action.

Outcomes

1.2   This Review is not about stopping children having fun or preventing them from taking full advantage of the educational, social and entertainment benefits that the internet and video games technologies clearly offer. It is about making sure they can do so safely, as far as possible, without being exposed to harmful or inappropriate material. It's about giving parents peace of mind by helping them to protect their children from the risks posed by technology in an informed way, backed by appropriate action from Government, industry and others. Through implementing the recommendations in this Report the best outcomes would be that children and young people are able to:

- Explore and use the internet and play video games for **fun, creativity and development**.

- Achieve this in an environment where there is a **reduced risk** of coming across harmful or inappropriate material.

- Manage or be able to find the support to **manage risks** that are age-appropriate should they encounter them.

- Take **ownership** of their own online safety and gaming and be supported to do so in **environments that encourage and promote safe behaviour** and provide user-friendly safety information and tools.

Scope

The Internet

1.3   When thinking about risks on the internet and in online gaming I have chosen the very useful grid set out below (developed by the EUKids Online project. Hasenbrink, Livingstone, Haddon, Kirwil and Ponte, 2007) to give some structure to the potentially broad ranging set of factors that constitute 'risk' in this area**.** It is important to remember that there is overlap between some of these categories and boundaries are sometimes blurred. In using these three categories on Content, Contact and Conduct, my definition of "potentially harmful or inappropriate material", in practice, has been broader than I initially expected.

	Commercial	**Aggressive**	**Sexual**	**Values**
Content (child as recipient)	Adverts Spam Sponsorship Personal info	Violent/hateful content	Pornographic or unwelcome sexual content	Bias Racist Misleading info or advice
Contact (child as participant)	Tracking Harvesting personal info	Being bullied, harassed or stalked	Meeting strangers Being groomed	Self-harm Unwelcome persuasions
Conduct (child as actor)	Illegal downloading Hacking Gambling Financial scams Terrorism	Bullying or harassing another	Creating and uploading inappropriate material	Providing misleading info/ advice

1.4   There has been extensive, successful and hugely important work in the area of illegal online content (e.g. child abuse images) and contact (e.g. predators meeting children online) by The Child Exploitation and Online Protection Centre (CEOP) and the Internet Watch Foundation (IWF). The Review in no way detracts from that crucial work to protect children, to prevent tragic and horrific cases of child abuse and to prosecute offenders. I believe that this work should continue to lie at the heart of the Government's safeguarding strategy when it comes to the very serious and proven harm to children and young people online.

1.5   Where a particular type of material is illegal society has already judged it to be unacceptable. My role has been to consider those areas where either we lack clear legal definitions in relation to online material or where the potentially subjective and sensitive nature of the judgements involved can make it difficult for government or industry to take decisive action.

1.6   Deciding what is *inappropriate* is subjective and based on many factors including the age, experience, values, belief systems and culture of the person making that decision. Some behaviours that take place on the internet, such as children's exploration to do with sexuality, may be considered inappropriate or even delinquent by an adult, but can play an important role in the young person's development. So what might be offensive for one person may be empowering for another.

1.7   Children and young people may also use the internet to explore issues around behaviours that adults might consider inappropriate (sex, drugs, alcohol etc.) either because they feel they have no one to ask or because they feel too embarrassed to ask. Clearly there are issues about how children use that information and this will in part be determined by the individual differences between children and young people, including social context, psychological factors and biological predisposition. Alongside age-related differences, these characteristics in children will determine whether the 'inappropriate' content, contact or conduct will actually lead to danger, harm or a risk of harm. These child-centred factors are discussed in detail in the next chapter.

Video games

1.8   The majority of concerns raised about the risks to children and young people from video games centre primarily on two areas: content, especially violent material, and excessive use, and the health impacts of playing video games (ranging from repetitive strain injury to lack of exercise contributing to obesity). The evidence on how children learn and develop as they grow up can help us define what material they should have access to – hence the existence of an age-rating system for video games. But here too perceptions of what is appropriate will vary across cultures as well as from one family to another or in relation to individual children. My Review has focused on the effectiveness of the mechanisms in place that help restrict children's access to games which are deemed to be inappropriate for their age. The wider moral concerns about the existence of violent content in video games are not within the remit of this Review.

1.9   Excessive use of video games was raised so strongly by respondents to my Call for Evidence, including by children and parents themselves, that I have looked at the research in this area to explore the findings about 'addiction' to video games (see Chapter 6). These concerns about the nature of children's 'media diet' are a central issue for parents and will be a key part of their motivation for managing their children's use of new technology. I recognise and support this – a balanced 'media diet' and range of play and other activities are important for development – but I also think we need to support parents to go beyond these concerns to think about and address wider issues of their children's safety online and in gaming.

Process

1.10   I have sought to put children at the heart of my Review. This is reflected in the process I have run, which has included a tailored Call for Evidence designed for children and young people (a summary of the Children's Call for Evidence is at Annexe D and can be found on my website[1]), a series of focus groups with them and with parents and consultation with the Children's Panels at CEOP and DCSF. I also held a competition with children and young

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1 www.dcsf.gov.uk/byronreview

people sending in pictures and other multi-media entries giving advice on how to stay 'netsmart' and 'gamesmart'. Their pictures are included throughout this report and the video entries are available on my website[2].

1.11   Gathering views and evidence from a diverse range of stakeholders has also been absolutely crucial to the Review and throughout the process I have endeavoured to be open, consultative and to listen to the many views and opinions of those interested in this important discussion. To achieve this I have:

● run an open Call for Evidence, setting out key questions facing the Review;

● held meetings with over 100 stakeholders, including a trip to the United States to meet with some of the major internet and video games industry players and public and third sector bodies;

● run three workshops with representatives of the internet and video games industries and with third sector organisations working with children and young people; and

● hosted an interim conference bringing all of these stakeholders together to share the emerging evidence, experience and perspectives.

1.12   I have been impressed and encouraged by the supportive and positive engagement from all stakeholders. This has enabled joined-up discussions and frank exchanges that have been of huge importance in developing my recommendations. It indicates the benefits of a collaborative approach to policy development. This way of working should underpin the implementation of my recommendations.

1.13   Finally, in order to review the vast array of evidence in this area I commissioned three literature reviews on:

● current media effects literature in relation to video games and the internet from Professor David Buckingham and colleagues at the Institute of Education;

● the latest picture on children's brain development from Professor Mark Johnson at Birkbeck University; and

● child development more generally from Professor Usha Goswami at Cambridge University.

These are all published alongside this report as Annexes F, G and H and are available on my website[2]. The full details of the Review process are set out in Annexe A.

The benefits of the internet and video games

1.14 Going online and playing video games are a central part of children and young people's lives and are rivalling traditional forms of media consumption (e.g. watching television programmes or films) whilst also providing platforms for traditional forms of media to converge (e.g. interactive video games containing pieces of film; television available on demand via the internet (Ofcom 2007). These technologies offer a range of opportunities unheard of in previous generations – opportunities for learning, for play, for communication, for skill development, for creativity and for having fun.

"The internet is a massive resource of information, although it is notoriously unreliable... It is a fantastic place to meet people and find support, friendship and happiness as well as a wealth of information as long as reliable sources are used. It is recently being used as a way to let people read rare books that they normally wouldn't find in the local library or bookshop. It's also a place to learn a massive amount about hobbies that you would normally have not much information about."

"I play video games for the same reason I watch a film or TV, escapism, the chance to be immersed in an intriguing or exciting story".

(Children's Call for Evidence)

1.15 The internet has become increasingly accessible for children and young people – at school, in public libraries or at home. With the growth of broadband technology children and young people have faster, easier and more immediate access to online information than ever before. More and more children and young people have mobile phones with internet access (Ofcom 2007).

"The internet is the single greatest repository of knowledge in the world".

"It helps me to do school work learn new things discover trivia, find out about new games, chat to my friends, and a lot more".

"I honestly couldn't live without it".

(Children's Call for Evidence)

1.16 Video games are among the most popular leisure pursuits of children and young people. While the average UK gamer is in their late twenties, almost 50% of games sold are suitable for children under the age of 12 and sales for the under 12 age group represent nearly three quarters of the total UK video game retail market. (Ofcom 2007, BBC 2005, Entertainment Retailers Association response to my Call for Evidence.)

"One of the reasons I enjoy playing video games online, is that I can interact with people from all over the world and make friends. Most online games have groups of players working together to complete objectives, which can improve team and leadership skills, or just for socialising while playing the game. Some of my best friends are online ones".

(Children's Call for Evidence)

1.17   These technologies are also valued by children and young people who live with disabilities that can make living in the 'offline' world a challenge.

"I'm a sufferer of Asperger's Syndrome, and video games may have realistically saved my life. I've always had problems talking to people face to face, and was never able to make friends at school. If it weren't for the relationships I formed online through my first games, I honestly can't be sure that I would be here today [...] they're obviously a great past time, which helps me nurture the better side of my Syndrome, thinking and responding logically."

"As with video gaming, the internet helped me form relationships that I couldn't in real life".

(Children's Call for Evidence)

1.18   Both of these technologies are also of huge importance to the UK economy. In 2006 the value of sales over the Internet was £130.4bn, with over two thirds of companies using the internet to assist their business (ONS, 2007). The UK Games industry employs around 22,000 people and is the fourth largest producer of games by revenue in the world after the US, Japan and Canada (ELSPA, 2007). We also have the highest number of development and publisher companies in Europe.

Potential risks

1.19   As well as increasing opportunities for children and young people, these technologies also bring potential risks and new worries for parents that include fear that their child may be damaged or harmed. Sometimes social problems are judged to be, in part, the result of the increasing use of new technology.

"I think it's awful. I would not let my son go on these games. It's horrifying what they think is OK. They can behave in a completely different totally unacceptable way. They think it's OK because it's virtual but I'm not so sure. It can't be good to go around being so aggressive."

(Mum of pre teen, rural community)

1.20   When it comes to children, any degree of risk is seen by many as unbearable. Concerns about risks to children and young people have lead some to argue that we live in a **'risk-averse culture'** which, while aiming to protect children from risks, increases their vulnerabilities by denying them opportunities to develop risk identification, assessment and management skills that can help children and young people keep themselves safe.

1.21   Risk taking is part of child development – part of our drive to learn and to succeed. Particularly in adolescence, risk taking is not only a developmental imperative but also a lifestyle choice: it is driven by developments taking place in the brain and it is an important part of identity construction. Taking risks is something children need to do to reach self-actualisation (the process of fully developing ones personal potential which is described in Maslow's Hierarchy of Needs, see figure opposite) and most children get pleasure from taking risks (Madge and Barker 2007).

1.22   It has been argued that children's immersion in life on the internet and in playing video games is partly a response to the tendency of their parents to restrict encounters outside the home given fear of associated risk or harm (Gill, 2007). Certainly it is not surprising that

children will increase their preferred indoor activities (online activity or video gaming) if their outdoor opportunities for play, exploration and socialisation are constrained. Indeed it could be argued that as we try and shield our children from supposed offline risks we push them online towards similar or other risks that we may not have thought about as much.

Maslow's Hierarchy of Needs (original five-stage model)

Self-actualisation
personal growth and fulfilment

Esteem needs
– achievement, respect, responsibility

Belongingness and Love needs
– family, affection, relationships

Safety needs
– protection, security, limits, stability

Biological and Physiological needs
– air, food, drink, warmth, sleep

1.23   A key finding from the review of the literature on the effects of new technologies on children is that the potential risks to children from using the internet are correlated with the potential benefits, for example, where the opportunity to find information is coupled with a risk of stumbling across adult material, or the benefits of being able to communicate and make new friends comes with a risk of potentially harmful contact from strangers or bullying. Just as climbing a tree can be exciting and fun for a child, leading to a huge sense of achievement and learning, there is always a risk that they will fall, especially if they don't have help and support.

1.24   It is helpful to think about the risks on the internet in the same terms as "letting your children go outside" or to think about video game risks as "letting your children watch an adult film". But there are also differences that we need to be aware of:

● In relation to the internet, anonymity, global reach, speed of change and the generational gap between children and parents all affect what the risks are and how they can be managed.

● New ways of using the internet mean that children's behaviour is 'recorded' in a way that gives adults a window into what might actually be some age-old, occasionally unpalatable, elements of youth culture and child development. Seeing children say hurtful things to each other, exchange unpleasant images or discuss sexual practices can make some of us feel uncomfortable especially when it challenges our perceptions of childhood innocence.

- In video games, the realism of games and the interactive experience, where children can be agents as well as viewers of the action, can change what the risks are, and this is especially true where these two worlds collide in the form of online gaming.

"I think where there is rightly some concern is in the online aspects to games, there is of course danger of predatory people on these games or exposure to language or behaviour that the child doesn't like. For instance you can buy a game rated 12 only to have the online crowd providing the kind of commentary only found in 18 rated films".

(Children's Call for Evidence)

1.25   Risks online and from gaming can also be different for different children. Research highlights that children from more deprived backgrounds may be more at risk online because of a lack of confidence with new technology (UK online/ICM, 2007). Equally, research has shown that greater exposure to the internet overall, which is higher amongst more affluent families, results in greater exposure to potential risks (Livingstone et al UK Children Go Online, 2005). However, it has been found that social psychological indicators of adjustment or wellbeing are the most strongly correlated with online risk (Livingston and Helsper, 2007).

1.26   I have been clear throughout the review that some risks are necessary for development but that they need to be appropriate to a child's age, stage of development and individual make-up and we need to support children and young people in managing them for themselves. As I show later in this report, we need to be alert to the possibility that many of the potential risks associated with use of the internet in particular are associated with potential benefits.

Drivers of concern about the risks of new technology

1.27   During the course of this review I have been struck by the degree of concern about risks to children from their use of the internet and video games. There *is* evidence to support many of the concerns that parents and others raise which is discussed in detail later in this report. But there are also two other key factors at play: a generational digital divide between parents and children and an ongoing debate in society and the research community about the effects of the media on society.

The generational digital divide

1.28   Part of the challenge for adults is that while we want to protect our children from harm or the risk of harm, and in most areas of life feel equipped to do so, our general lack of understanding, knowledge and skills relating to the online space and with video games means that we lack confidence and often don't know how to use the tools available to keep our children safe. Many parents are unsure about how to teach their children risk management skills in a world they don't always understand. So, while we feel confident about enabling our children to learn about risks and risk management in the 'offline' world (e.g. teaching them how to cross the road safely or not to speak to strangers) because we have experience and knowledge of these aspects of life, we have not grown up with these technologies and this can make us feel anxious.

1.29   This is particularly the case for *new* media. For most adults, television and film are the media that they are most familiar with. There is already extensive regulation around TV and also a greater sense of understanding around managing the TV that children watch. Parents know about the watershed and many are aware of and use pin codes to lock off adult channels. They have confidence when using televisions and associated hard and software (which they use largely in the same way) as they have grown up with it. In the course of my Review many of the people I have spoken to characterize this as many adults being of the Web 1.0 generation (using the internet to search for information or for shopping) while our children are the Web 2.0 generation, using the technology in increasingly sophisticated ways to create and upload their own material.

"The whole of technology scares the life out of me. How do I set it up so that it is safe?"

(Mum of 5 and 7 year old)

"I haven't got a clue what she's doing on MSN, she can talk to ten friends at once without leaving the room."

(Dad of teenager)

"You can't turn the internet off…"

(Children's Call for Evidence)

1.30   Our children on the other hand have grown up with an increasingly sophisticated use of the internet and video games. They have greater experience of these worlds which often merge with their offline lives. In effect there exists a **generational digital divide** between children and parents that many adults find impossible to navigate. Roles are often reversed with children understanding and being far more adept in the use of technologies than their parents. For adults to educate, empower and protect children about issues they are less familiar with, have less experience, understanding and knowledge of, makes for an uncomfortable dynamic between the adult and child.

"I wouldn't listen to my parents anyway, as they don't know enough."

"My Mum and Dad haven't got a clue, I set up the virus software and parent filter, to control my brother, they should make it easier for parents to set up."

"Parents could be better educated in the way of computers, since kids are learning young, and can use the internet easily. If parents know the ins and outs of computers, protecting kids from adult material on the internet will be far easier".

(Children's Call for Evidence)

1.31   This divide can leave many adults (parents, educators, policy makers etc.) feeling disempowered and anxious about the use and effects of such technologies.

"There are risks to children who have not been taught about the net properly, however I think that the amount of children abducted or abused via the internet is highly exaggerated by parents".

(Children's Call for Evidence)

"Unable to refer back effectively to their own childhood experiences many parents feel unable to make good choices for their children in this area"

(The Association of School and College Leaders, Call for Evidence)

"I accept that there are very real dangers- for instance internet predators and general unpleasant people on the internet, as well as virus' and spyware however I have to say I think the whole 'predator' thing is drummed into us too much at schools. I have to admit that I just feel resentment with being told 'Everyone you meet online is trying to harm you' which is the impression we are given during our PHSE lessons. Not everyone, in fact the minority of people online are so called predators and the constant negative slant on the internet makes me resentful towards the advice we are given as it's so biased".

(Children's Call for Evidence)

The social context

1.32   These anxieties of parents, driven by a lack of knowledge and skill, can be compounded by media stories which may link anti-social and criminal behaviours with technology use amongst children and young people. Sometimes this can lead to narrow emphasis on the potential harm of specific aspects of children's technological use (i.e. content issues) without a clear idea of the wider risk factors affecting children's safety and wellbeing.

1.33   Concerns about the role of mass media on society always take place within a social context (Buckingham, 2008). Currently, concerns about exposure to media causing harm are often expressed within broader anxieties about deterioration in the mental health and behaviour of children. In the book Toxic Childhood, Sue Palmer (2006) asks:

"What's happening to children? Why do one in five now suffer from mental health problems or behavioural and learning difficulties?"

1.34   Palmer defines 'Toxic Childhood Syndrome' as being the result of a combination of "modern world" factors that are "damaging our children" and discusses how we can 'detoxify' our children. Among these potentially 'toxic' factors are those associated with the rapid growth of mass media.

1.35   Social concerns about the role of the mass media on the mental health and behaviour of children and young people becomes heightened in the context of crimes committed by and/or against children. In such tragic instances, there is a struggle to understand how children could exhibit such extremes of behaviour and in some cases explanations have centered on children's use of new media – the assumption that playing violent video games makes children more violent or that access to inappropriate content on the internet influences their judgments about what is right and what is wrong. There have been a number of high profile and tragic cases where violent acts by children and young people have been linked with intense use of violent video games or other media by children (e.g. the death of Jamie Bulger in 1993; The Columbine School Massacre in 1999) (Barker, 1984b; Buckingham, 1996).

1.36   These are complex cases involving very vulnerable individuals and unique circumstances and it is important to consider that the anxiety and devastation caused by such tragic and senseless acts can lead to an innate need for simple and clear explanations of cause. Simple explanations can lead to emotive calls for simple solutions which may not necessarily 'solve' the problems (given a lack of evidence) but may leave those most anxious and distraught feeling that 'something is being done'. An example of this is when following the shootings at Columbine High School in Colorado, USA, in 1999, there were strong calls from some for the banning, not of guns, but of violent video games (Jenkins, 2006a). What ensues is an extreme polarisation of the debate and calls for action which range from calls for censorship to calls to protect freedoms of speech.

1.37   Combining anxieties about the potential dangers of modern technology with worries about the moral welfare of the young provides a very potent basis for public anxiety (Jenkins, 1992). On the other side of this debate are those who argue that the media and new technologies are being used as a scapegoat for complex and multi-faceted social problems. The focus of this discussion around such tragic instances and individual histories has lead to a highly polarised debate within society and to some degree I have found this dynamic reflected within the research community. We need to navigate a path between different findings and base our thinking on assessments of possible risk as well as proven harms from the evidence.

The research context

1.38   Millwood Hargrave and Livingstone (2006) suggest that harm is "widely (though not necessarily) conceived in objective terms… taken to be observable by others … and is hence measurable in a reliable fashion". When it comes to children, adults and policy makers want clear 'evidence' of what is 'harmful' and turn to research evidence to find this. This was an important part of my Terms of Reference and to consider the issues I commissioned a comprehensive review of current media effects literature in relation to video games and the internet from Professor David Buckingham and colleagues at the Institute of Education. I have also consulted widely with a range of academics in the field of media studies, sociology, education and child and brain development both in the UK and abroad with the aim of gaining a broad understanding of academic findings that might relate to the question of harm to children from these technologies.

1.39   The effect of the media on society has been an area of academic study since the 1930s (looking at cinema) and the late 1950s (with concerns about television). The broad social and political context, including public anxieties of the time have been the drivers of the kinds of questions that are asked and the research methodologies used. Buckingham (2008) talks about the 'perpetual recurrence' of questions that have been studied historically in relation to new forms of media as they are developed – usually surrounding concerns about moral values and typically in relation to violence and sex. He and others argue that the current debates on the 'harms' of video games and the internet are the latest manifestations of a long tradition of concerns relating to the introduction of many forms of new media (e.g. comics and popular theatre of the 19th century and the telephone: Barker, 1984a; Springhall, 1998).

1.40   There are a range of theoretical, methodological and political difficulties in researching these issues (Millwood Hargrave and Livingstone, 2006). Buckingham (2008) outlines the two main research traditions within the literature on media effects which divide academics and reflect basic theoretical and political differences. This has led to a polarisation of views particularly with reference to the effects of video games on children. These two traditions and the wider hypotheses on potential effects (such as catharsis and imitation) are explored in detail in the coming chapters. There are also other challenges:

- Research becomes quickly out of date and cannot move at the pace of technological change – a particular issue in the context of how long it can take to publish academic works.

- It is difficult to study long-term implications because the technology is often so new and use is changing.

- Much of the research is unhelpful for policy makers as it is more common to identify problems with the research than truly evaluate its implications.

- Much of the research (particularly within the experimental studies tradition) comes out of the States where the cultural context and concerns may be different.

1.41   It is of crucial importance within this research debate that alongside the consideration of negative effects we also consider the benefits to children and young people of these new technologies. Importantly, claims for beneficial 'effects' of the media are just as difficult to break down and prove as negatives – just as they would be if one were to attempt to measure the same effects in relation to reading books, for example.

1.42   With the internet there has always been a general recognition of the benefits it can offer to children and adults alike. However, with video games the bigger focus has been on the negative effects with the benefits only receiving wider recognition (and research funding) in more recent years. The research shows that the benefits of new technology can often be strongly correlated with the risks – we need to keep this in mind when seeking to manage those risks so that our approach, as policy makers and parents, does not have a disproportionate and unintended impact on the potential benefits for children.

1.43   It is possible that apparently negative or 'inappropriate' content may create positive opportunities for learning. Children may develop strategies for coping with 'inappropriate' material and it can be a source of information and contribute to the process of actively developing their own values and beliefs.

1.44   There seems to have been a shift in recent years away from a focus on the concerns of digital media towards trying to understand the benefits it can afford children and young people. For example, in the States, the MacArthur Foundation has recently launched its five-year project to help determine how digital technologies are changing the way young people learn, play, socialise and participate in civic life. Our knowledge about this area is likely to grow enormously with the initiation of projects such as these.

Conclusion: a child-centred approach

1.45 Technology offers extraordinary opportunities for all of society including children and young people. The internet allows for global exploration which can also bring risks – the online world paralleling but in some ways also diverging from the offline world, and video gaming offers a range of interactive experiences to children, but some of these are designed for adults. However, the generational divide between parents and children when it comes to new technology often means that adults are less clear about their role in enabling children to manage 'virtual world' and online risks in the same way that they manage risks inherent in the offline world.

1.46 New media are often met by public concern about their impact on society, especially children and young people. Indeed, children's use of the internet and video games has been seen by some as directly linked to violent and destructive behaviour in the young. These debates exist within a risk averse culture where we are increasingly limiting our children's out of home experiences because of fear of harm to them. Anxiety and polarisation of debate can lead to emotive calls for action and make it difficult to use the evidence as a basis for policy.

1.47 The research debate on 'media effects' reflects the polarisation of the general debates on this question in society. In relation to video games, simple models of causality are not useful. When it comes to the internet, the correlation between benefits and potential risks means that we need to take a sophisticated and proportionate approach. In my Review I have tried to approach these issues by thinking about the 'probability of risk' to the child. This means taking into account children's individual strengths and vulnerabilities and moving our thinking from what effect technology has on a child to considering what the child brings to the technology that might increase the likelihood of harm. We need to focus on the child, what we know about how children's brains develop, how they learn and how they change as they grow up. This is discussed in the next chapter.

Competition runner-up: Author unknown

Chapter 2

What Children Bring to New Technology

2.1   In the last chapter I set out the scope of my Review and a discussion of the social context that surrounds the issue of potentially harmful or inappropriate content. In seeking to define the parameters of the problem I also explored the tensions in the evidence on 'media effects' and concluded that it is important to shift from a model of direct causality to one in which we think about the probability of risks to children in different circumstances. A key part of this is understanding what children bring to technology, in terms of their age and stage of development and individual differences between them. We need to take a granular approach. Parents are used to doing this for their children in the management of offline risks but inexperience with the technology can mean that parents are less clear about how to manage their children's online and gaming experiences.

2.2   It has been of utmost importance to me to keep the child at the heart of this review. In order to do this we need to keep a whole concept of the child in mind. In this chapter I set out what we know about children's development – how their brains change during childhood, how they learn, and how age can be a useful guide to developmental stage – and what this means for identifying, assessing and managing potential risks.

What children bring to technology is important in defining the potential impacts on them

2.3   The model below shows this:

The interaction between child and technology (or content) is what determines the 'effect'
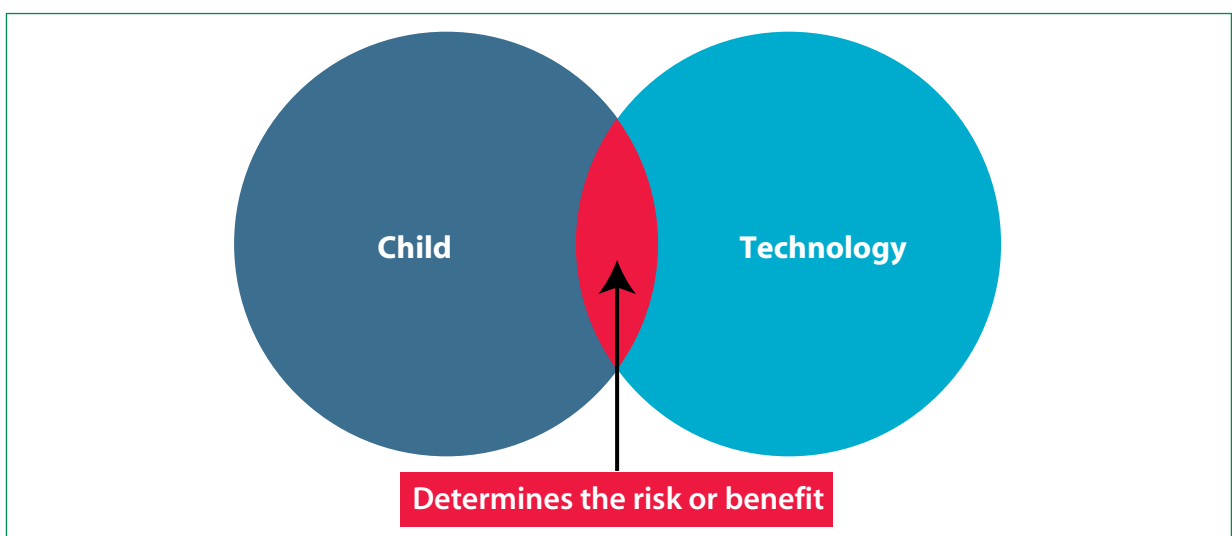
2.4 To use this model we need a shared understanding of what drives individual differences in children. This is influenced by multiple factors which can be categorised into:

- Biological predisposition (e.g. neurodevelopmental profiles, temperament)

- Psychological factors (attitudes, thoughts, emotions)

- Sociocultural context (models of behaviour going on around the child – beliefs, attitudes, ideology)

2.5 This is known as a biopsychosocial model of development which recognises the different levels of influence in each area and is illustrated below.

Biospychosocial model
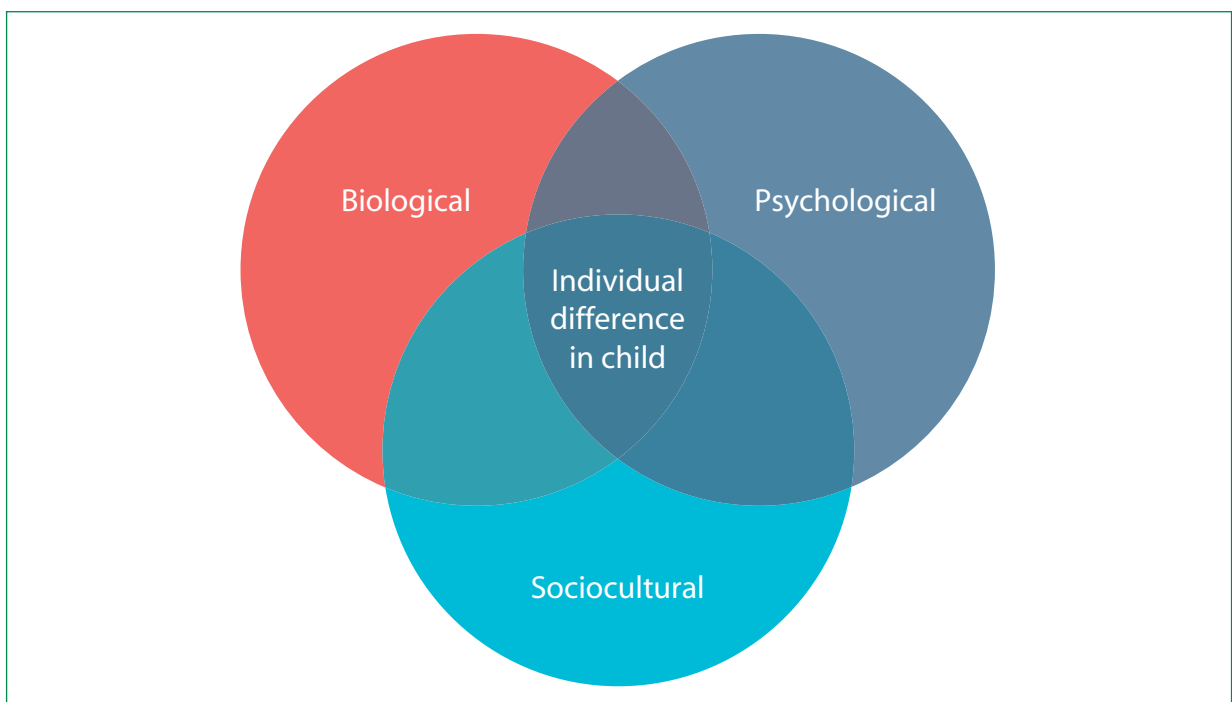
Child Development: brain, age and individual differences

2.6 In order to gain an up-to-date understanding of brain development and child development I commissioned two literature reviews on both of these subjects from Professor Mark Johnson at Birkbeck University and Professor Usha Goswami at Cambridge University.[1] Below is a discussion of the key relevant factors.

Brain development

2.7 Brain development is an incremental, gradual and experience driven process. The way a child's brain develops depends very much on what the child experiences and so their experiences of video games and the internet are potentially extremely important. Brain structure (neuroanatomy) and function (operations of the brain) are interrelated. So, while the structure of the brain can determine experience, experience can have an impact on

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1 These are available as Annexes G and H to this report – downloadable from www.dcsf.gov.uk/byronreview

that structure (for example London taxi drivers show an enlarged hippocampus – the part of the brain associated with spatial mapping etc.)

2.8 Brain development takes place throughout childhood, developing 'neural networks' connecting different parts of the brain together as it grows. Even during adolescence we see significant changes in brain structure and function. The postnatal period of brain development is much longer in humans than other species – further support for the fact that human brain development is sculpted by experience.

2.9 The brain is a 'self-organising' system – it adapts to its environment and selects experiences for its future development. For example, children tend to be engaged by tasks they are only partially successful at and seem to be motivated to persist until they are better at it. It's as if the brain is self-selecting its input. This may help explain why children really enjoy playing some video games.

2.10 All these factors together mean that any significant changes in children's early experiences in life, such as a significant change in the amount of technology used during childhood, could potentially have a big impact on how the structure and function of the brain develops. Development in the brain is thought to involve a "Hebbian" process (cells that fire together, wire together) which involves the strengthening of connections that are used and the pruning of excess connections that are not used, so some skills could show a significant increase based on children's technology use during childhood and this could either be negative (e.g. skills such as throwing are less well developed as children are spending so much time engaged in screen time) and/or positive (e.g. skills such as attention which benefit from game playing could be better developed).

Child development: how children learn

2.11 It is imperative we consider how children learn throughout their development, especially given the on going debate in the research evidence and the need to think about probabilities of risk rather than conclusive harms. A major concern relating to video game playing is whether children learn anti-social or violent behaviour from the games they play. How much could children learn from inappropriate content or behaviour online or in video games?

2.12 When I go through the evidence for video games and for the internet in each specific chapter I consider the research relating to both these fields in more detail. However, before that I will set out some basic child development considerations that impact across the entire scope of this review.

2.13 It's important to think about whether the mechanisms by which children learn through "virtual" worlds could be the same as those through which children learn in life. This isn't directly addressed by the media effects research at present but we can speculate about this in the context of what is known about how children learn and develop.

2.14 We learn in a number of ways:

Imitation – Children may imitate what they see in games or online

2.15   A key mechanism of social learning is imitation. Children copy what they see. They also make analogies – taking information from one situation and applying it to another. It is via this type of mechanism that children could have a 'virtual' experience of something they hadn't experienced in the world and then apply it to a situation in life. This could be positive (learning how to care for animals from playing a zoo-keeping video game) or negative (learning how to victimise someone from playing a war game) and depends also on the context of the experience (e.g. playing violent games within a household where violence is the norm).

Expectations – Children's expectations about the world may be changed by what they see or experience online or in games

2.16   In order to cope with the enormous amount of input information into the brain, there are ways of short-cutting our processing of information. One way we do this is to set up expectations that affect how we perceive information – this is where the brain abstracts the structure of experienced events, and sets up expectations about what will happen in the future; this is called *Neural Statistical Learning*. The implication is that if a child has had frequent experiences of playing a game, it is possible that the brain will set up an 'expectancy' to act in the real world in the same way that they act in their virtual world. This could be either positive or negative to the child. For example, game play may mean that children set up an expectation that if approached by a stranger, that person is hostile and the reaction should be to 'attack'. i.e. the child learns to associate the cue (stranger approaching) with an action (attack) because they expect that person to be hostile. However, whether this then generalises to their real world behaviour is unknown and it is likely that the context within which playing takes place is important here (see Schultz et al, 2004 research on the attributions and expectations of anger in children with conduct disorders from violent homes).

Mirror Neurones – The increasing sophistication and realism of games and content online may lead to deeper social learning in children

2.17   In order to learn about the behaviour of others, children watch the goal-directed actions of others. One of the systems they use to make sense of other people's actions is the "mirror neurone system". This comprises neurones that are active when actions are performed on an object (tearing, grasping, holding) and also active when we observe someone else performing this action. One of the earliest findings from research into mirror neurones is that they are only activated when a human hand (versus a mechanical hand) grasps an object (Tai et al, 2004). When we think about how children might learn from what they see in a game or on the internet we need to consider whether the 'agent' (person or cartoon) on the screen is perceived as 'human' by the brain. As graphics become more real-life it is possible that these forms of learning, previously activated only by the real world, will be activated and social learning about the world through technology will increase.

New media that require active responses may lead to deeper learning than media requiring passive viewing

2.18   Information gained through action is central to cognitive development. Only by trying or 'doing' can children rule out certain possibilities about how the world works and reinforce others. Children have a drive to act out, as information gained through action deepens the

experience by engaging distributed neural networks throughout the brain (e.g. the motor, sensory and language systems all get activated together). The implication is that media that requires active responses (rather than simply passively viewing) is likely to have a more profound influence on the children's development. This could be beneficial (hand-eye coordination skills) or negative (learning to use violence) – again, other factors such as the age and social context of the children would be important determining factors here.

Exposure to technology could offer opportunities for families to enrich their child's capacity to understand emotions, feelings and moral values, or could both extend or displace this important communicative learning experience

2.19   One of the key ways children learn about emotions, feelings and moral transgressions is by discussing feelings, emotions and behaviour (usually in the family context). Technology could provide a context in which families could extend this kind of learning in the child through shared experiences and discussions around, for example, the morality of content or, alternatively, it could have a detrimental impact if these discussions do not take place and are replaced by excessive exposure to potentially inappropriate material that is not then discussed.

2.20   These basic forms of social learning experiences are used by some researchers to suggest that, for example, playing violent video games causes harm and could lead to long term behaviour problems and violent tendencies. From what we know about children's development it seems that the nature of the experience during a video game might be very important in determining children's subsequent behaviour; although quite what the long-term impact of this might be, or what other factors in the child's individual make-up or experience modulate this learning mechanism is unclear and needs to be considered as we take a probability of risk approach.

2.21   However, it does appear that the child's social context is an important factor in mediating learning through game playing – i.e. violent content may lead to sustained learning about violent behaviour in children where violence is the norm (the game playing reinforcing and validating real world experiences). This is supported by evidence that some brain mechanisms (e.g. mirror neurones) appear to be experience-dependent and only respond to actions that the person has previously experienced (Johnson, 2008). Therefore, if mirror neurones are only fired by the experience of violent online or game content in children who have experienced violence themselves, we can begin to speculate that longer term effects of negative or inappropriate content will be more likely to be seen in children who have similar negative experiences in the real world. More research is needed to clarify this so that we can identify which children are more vulnerable.

2.22   Furthermore, although we do not know how children learn from virtual reality, it is possible that if virtual experience outweighs other socialisation experiences, these virtual realities could have a dominating effect on how children perceive the world and the expectations their brains set up.

Action and interaction online may have an impact on children's sense of self and be a particular risk for those who are already vulnerable in the offline world

2.23 Other concerns about the role of harmful or inappropriate material in technology is how children use online or virtual information or experiences to develop a sense of self – the inner working model of ourselves which drives how we think and feel about ourselves and in turn affects how we behave (e.g. emotional regulation, impulse control, self monitoring). For example, within some virtual worlds there is the potential to develop a new identity (called an 'avatar') and this raises the question of how this might affect the development of a young person's sense of 'self'. For the majority of people, the impact of new media on the development of the self are likely to be relatively insignificant since the system for developing it is strongly linked to very early attachment relationships in the offline world – e.g. with parents and carers. However, individuals who are vulnerable due to a poor early attachment experience, may turn to the internet to create a false identity e.g. via an avatar or to create a false profile on a social networking site which will allow them to change their representations of themselves, at least online**.** This could potentially have an impact on enabling them to work through difficult factors and increase self esteem when all else in their lives is difficult – to experience life as a different person. An important question here is what the impact of this might be on a vulnerable person and whether children's perceptions of themselves in real life are significantly affected by their other fantasy 'selves' which in turn may impact on their behaviour towards themselves and others either positively or negatively.

2.24 However there is clear evidence of harm within the virtual world when vulnerable children with a poor sense of self and low self esteem are 'seduced' and flattered by others who represent themselves falsely within the virtual world (e.g. online predators pretending to be children) (CEOP, 2007).

2.25 Other concerns in this area centre on what children learn from the vast world wide web of information available to them and how they can be influenced by this and also who can influence them with thoughts and ideas. Certainly the internet seems to be a source of support and comfort in certain situations as a means by which individuals can share difficult experiences and gain support. However, there are examples where the very vulnerable may access information and even persuasion by others which may encourage them or even lead them to harm themselves (suicide websites; pro-anorexia sites etc.). While the online space can provide a supportive environment and de-stigmatise the discussion of mental health or emotional difficulties and enable those in distress to find sources of advice and support, what is clear is that there exists a significant probability of risk for some individuals with mental health and other vulnerabilities who engage with such material online.

A practical approach to risk management – age, stage and the frontal cortex

2.26 The challenge for policy makers is that we need to keep in mind the vulnerability of some children while enabling them and others to use technology to truly develop and grow. We need enough protective mechanisms in place to support safe internet use and gaming by the majority alongside targeted approaches to helping the more vulnerable. And these are not absolutes – children's vulnerability to different risks will change as they develop. This is why thinking about children's age and stage of development is a useful way of establishing general guidance on how to support children's internet and video game experiences, in the same way that we use such factors when making judgements about experiences and risk management approaches for children and young people in the offline world.

2.27 Children grow and develop in a linear fashion and there are certain characteristics about children of each age that can be useful guidelines. The caveat is that children's rate and profiles of growth vary enormously between each other so while it is possible make broad statements, there will always be individual variation.

2.28 Surprisingly little is known about age-related brain changes. There are times during development when certain parts of the brain are more adaptable. These might be referred to as 'sensitive periods'. This suggests that children are tuned to learn about specific functions at different stages in their development, although recent research suggests these periods are not fixed and are more flexible than was previously thought. One potentially very important set of robust findings relates to the development of the front part of the brain – the 'frontal cortex' – the 'intelligent' part of the human brain. This is the part of the brain that enables us to plan and organise, to have conscious strategic control over our thoughts, feelings and behaviour and to choose between good and bad, fantasy and reality. It also plays a key role in enabling us to override, suppress or inhibit behaviours, such as unacceptable social responses.

2.29 The frontal cortex develops throughout childhood and into early adulthood and therefore children with immature and developing frontal cortex structure and functioning are less efficient at reasoning because they have yet to develop their critical evaluation skills (how to judge information based on context), are worse at inhibiting irrelevant information and also do not regulate their social behaviours well. Moreover, there is recent evidence that adolescence (post puberty) is a time of enormous growth and development of the frontal lobes. There are neural networks that link this crucial part of the brain to the rest of the cortex and it is during adolescence that a lot of this development takes place. Functional improvements are seen in selective attention, working memory, problem solving, multi-tasking. However, other frontal cortex development continues and is facilitated by socialising and risk taking.

Age related changes

Pre-school	Primary	Secondary
• Focus on family	• Shift to outside family	• Drive for social interaction
• Attachment relationship is key	• Developing friendships, learning, behaviour	• Risk taking important for development
• Full support required	• Supervised exploration	• Collaborative management strategies

Frontal cortex development

Picture source: http://www.neuroskills.com

2.30 One very important way to think about how to support children with the management of 'harmful' or 'inappropriate' material online and in video games is to look at the development of their frontal cortex. This is because the functioning of frontal lobes enables us to make sense of the world and make judgments about our behaviour and the behaviour of others, as well as differentiating between reality and fantasy. So when we think about ways of making children safer online and in their gaming – whether that's through industry making the environments safer or parents being supported to use the tools available to them – it is as if we are stepping in to provide the necessary frontal cortex functions that enable children and young people to manage risks at different ages and stages of development.

2.31 This approach acknowledges that children at different ages and developmental stages have varying abilities in making sophisticated judgments about information such as the credibility of a source or whether something is morally or socially appropriate. These systems are not in place in the brain during early childhood and develop over time into early adulthood. Just as we perform these functions for our children in the non-digital world, such as when helping them cross the road, we need to do this when they use the internet and play video games. The next section sets out how these sets of cognitive and behavioural skills change during different key phases of childhood.

Specific developmental age bands

Pre-school

2.32 This is a time when children are still very much focused on the family and the home. Key to children's development at this time is forming relationships with key adults – developing a strong attachment bond which will go on to lay the foundation for the child's relationships throughout life. A key frontal cortex cognitive skill that is underdeveloped at this age and stage, but develops with age (Harris et al, 1991), is the ability to differentiate between reality and fantasy and as such these children are more vulnerable to content e.g. violent, frightening, sexual or highly emotional.

2.33 Given the lack of critical evaluation, self regulation and impulse control in children of this age it is imperative that their access to the online world and video games is robustly monitored and supervised. Their "technological diet" needs to be restricted, in terms of what they should access, watch, play, when, and for how long.

5-11 years

2.34 During this time children start school and begin to make bigger shifts in how they relate to others outside the family – these experiences, as well as their development in terms of age, impact on the functioning of the frontal cortex. They are developing friendships with other children, learning what is right and wrong, learning about social rules and norms, sorting out reality from fantasy. They are still immature at self-regulation, and their ability to inhibit and control impulses and emotions is still well below that observed in adults. This is the time when children begin exploring websites beyond the boundaries originally set for them by their parents and also when they start playing a wider range of video games.

2.35   Critical evaluation and self regulation skills are still relatively poor due to their under-developed frontal cortex therefore adults need to provide support with these functions for the child – allowing them to explore but at the same time regulating, managing and restricting, as is appropriate. In line with the developing child and the developing frontal cortex, management of their media diet should start to change, moving from heavy control to management by supervision and increasing discussion about online and gaming behaviour. This enables the child to develop their own critical evaluation and self management skills as well as being supported when they cannot or, as in the case of the older children in this age band, choose not to.

11-14 years

2.36   The onset of puberty marks the beginning of a time during childhood which is characterized by lots of brain and behavioural change. Adolescence is often an unstable and emotional time when young people become vulnerable to the challenges presented by the hormonal, physical and mental changes taking place. During this time there is a significant drive for social interaction. The focus of the child's social world changes from the home and family to the external world, to peers and idols as individuation (the process of disengaging from the family unit, and beginning to become an autonomous, independent adult) begins. This means a shift from parental identification to peer identification requiring a degree of experimentation which may involve taking risks. Peer communication becomes a central part of adolescent behaviour due to this drive for social interaction as young people attempt to find their own sense of who they are in relation to others. There is some evidence that social networking sites offer teenagers a place to test various adolescent behaviours or to take 'safe' risks (Livingstone, 2008).

2.37   Along with these changes comes an increased vulnerability to mental health problems and susceptibility to poor self-esteem. Young people at this age may become more vulnerable to messages about social acceptance including issues relating to body image – this is a time with a significant increase in problems such as eating disorders, low self-esteem or depression. Alongside this is a shift in the nature of thinking when adolescents are more self-aware and self-reflective than children who have not yet reached puberty.

2.38   Skills that seem to undergo most change during this time are internal control, multi-tasking, planning, and social cognitive skills. Interestingly, at the same time as this re-organisation takes place (age 11-12); there is a *dip* in a young person's ability to process social information (social cognitive functioning) with a gradual improvement in performance up to the age of 16. This is consistent with a reorganisation of this kind of brain functioning (Blakemore and Choudhury, 2006).

2.39   A dramatic brain re-organisation is also happening at this time. Neurones begin firing at an increased rate in the frontal lobes. There is also a fine-tuning of the functional neural networks linking the frontal region to other parts of the brain, as the brain learns to process certain information in a different (arguably, more complex) manner, in preparation for adulthood. Such functional changes underpin the inherent drive at this age to seek out social experiences – these are more likely to be sought in the digital world as we restrict children's and young people's access to the outdoor, offline socialisation (see Chapter 1).

2.40 In terms of behaviour, adolescence is commonly described as a period of increased impulsive and risk-taking behaviour, and scientists have hypothesised that this is related to changes in the brain's "reward" network. Increased activity in the brain's "reward" network is associated with more risky choices – this is seen for example in adults when they gamble (Johnson, 2008). It is known that adolescents show greater activity in their reward network (involving a brain structure called the nucleus accumbens) than younger children or adults. Research has suggested that there is an association between risk taking behaviour during adolescence when the brain system involved in the anticipation of reward is undergoing developmental changes (Galvan et al, 2006).

2.41 Therefore, when thinking about adolescence and these new technologies, we need to consider how this important process of exploration and experimentation takes place over the internet and in cases where children and young people seek out access to age-restricted material and experiences such as video games which are designed for adults. There are biological drives and underpinnings to these changes in behaviour – both in terms of drives to socialise and to take risks – and we need to respect and allow those while, at the same time, putting in place protections for their vulnerabilities. In terms of adult input with the young person and technology, this is a time to move towards collaborative management. Young people may evade and rebel if parents are heavy-handed at this stage. The aim is to protect them from some content or experiences, empower them by discussing risk and mediate interpretation of challenging content.

15-18 years old

2.42 This period is the last stage of what we consider 'childhood', when young people may still be the responsibility of their parents, but are also viewed as young adults. During this time, young people want to be seen as individuals and explore roles and identities with a degree of autonomy and are often able to do this independently. They can initiate and carry out tasks without supervision and can see themselves from the viewpoint of others. By this stage their brain functioning is extremely close to that of an adult and so they can master abstract thinking and develop theories to explain and make sense of things. There are no longer the inherent restrictions of brain development that lead to difficulties with evaluating information or making judgments. Indeed, young people at this stage are beginning to develop their own set of values and beliefs (which may be different from their parents).

2.43 Effective online management at this stage will involve providing opportunities for them to explore and try different roles and identities while offering non-judgmental support in the form of talking, discussing and supporting. At this stage young people need to begin to make decisions for themselves and test things out while still having relationships in place with e.g. parents, family members or friends to support them if opportunities turn out to be too challenging. Interestingly, much of the innovation and development of the new technologies and games is done by people of this age.

Conclusion

2.44 What children bring to their experience of technology is key to understanding the potential risks. Children's behaviour and experiences will be mediated by a number of risk and protective factors that are biological, psychological and social. Defining specific risks or

harms to children is difficult given that while we can categorise by age and gender there are vast individual differences that will impact on a child's experience when gaming or online.

2.45 The child development literature enables us to think about the impact of new technologies in a number of ways:

- At a neural level where virtual experiences may lead to learning behaviour through imitation; by setting up expectations of the behaviours of others; by affecting how we understand and learn from the goal-directed actions of others through the mirror neurone system.

- At an emotional and psychological level where virtual experiences may affect behaviour via the development of self identity, e.g. self esteem issues such as body image or the desire to self harm.

- At the level of age related factors given the changing role of the frontal lobes (that mediate experience and behaviour) throughout childhood and adolescence.

- At the level of the social context within which virtual experiences occur where, for example, violent content experienced within a violent home environment may be more powerful because it validates the violent norm.

2.46 However each of these must be considered as having a greater or lesser effect on the child or young person given the presence of a number of other risk or protective factors (such as early attachment).

2.47 We can use these findings to help us navigate a practical and sensible approach to helping our children manage risks. We can take a staged approach to how we manage their online and gaming experience in line with what we know about their innate ability for risk management and developmental drives for risk taking at different ages. This is no different than how we think about managing risk for children in the offline world where decreasing supervision and monitoring occurs with age as we judge our children to be increasing in their competence to identify and manage risks. So, when we teach our children to cross the road safely we do it in stages.

- We hold their hand when they cross the road.

- We teach them to think, look both ways and then cross.

- When we see that they are starting to understand this we let them cross, walking beside us, without holding on to them.

- Eventually we let them do it alone, maybe watching from a distance at first, but then unsupervised.

- And throughout this, the environment supports them with signs and expected behaviour from others in the community – the green man, zebra crossings, speed limits and other responsible adults.

2.48 Going online and playing video games may be more complex and diverse than crossing the road, but it illustrates that we should change the nature of our approach and interventions

in the digital world with children's growing competencies and changing vulnerabilities, as well as identifying and supporting those children inherently most vulnerable.

2.49   With new technologies come new experiences and also new risks and from this there develops a new culture of responsibility for adults in relation to children and young people. How we plan and execute these responsibilities can be informed by taking a granular approach to the risk management competencies of children and young people at different ages and stages of development. Our responses and actions must be proportionate to the risks involved, the age and stage of the child and also their inherent abilities and vulnerabilities across biological (especially brain), psychological, emotional and social domains. Also, we must have the confidence and ability to enable our children to learn and grow with us and to empower them to take ownership of their safe and responsible digital behaviour.

Safety tips on the net. Byron's report

Top "5" Tips Don't give

anyone

Personal Details

Address

Phone number

name

Age

Competition runner-up:
Courtney Rae, age 10

Chapter 3

The Internet: Towards a Strategy for Keeping Children Safe

Setting the scene

3.1   The advent on the internet has had a massive impact on our society and our economy – in 2006 the value of sales over the internet was £130.4 billion (Office for National Statistics, 2007). At the vanguard of this new technology are our children. Some 99% of children aged 8-17 access the internet (Ofcom, 2008) and 90% of children aged 5-16 now have a computer at home (ChildWise, 2008).

3.2   Children's usage of the internet represents the huge diversity of the medium. As children mature, they begin to use the internet in increasingly sophisticated ways: 8-11 year olds are more likely to say they are going online for gaming purposes, whilst 12-15 year olds are using it as an educational tool as well as for downloading music/movies/videos and watching video clips. The oldest age group (16-17 year olds) are most likely to be sending email, visiting social networking sites, uploading photos/videos and either maintaining or contributing to other people's 'blogs' or websites (Ofcom, 2008).

3.3   On balance, both children and their parents are positive about the internet: 64% of 8-17 year-olds and 67% of their parents agree that those without the internet at home are at a disadvantage. However, there are also perceptible downsides to the online experience. 12% of 5-7 year-olds and 16% of 8-17 year-olds say they have come across harmful or inappropriate content on the internet in the last six months (Ofcom, 2008).

The voice of children, young people and parents

3.4   Young people in my focus group sample were in most cases unreservedly positive about the internet, highlighting its benefits for education, networking and entertainment. They and their parents agree that 'having the world at your fingertips' is amazing. It makes doing homework easier and more interesting and some think it actively encourages engagement in school work. Communicating from home is seen as safe and a cheaper and more efficient alternative to using the phone.

3.5   Unsurprisingly, patterns of use and attitudes to the internet change as children get older. Usage seems to peak in the early and mid-teens when there is a shift from using a relatively limited number of sites mainly for fun, to much broader exploration of the internet and increasing usage of sites for homework and for communicating with friends.

Age impacts on behaviour, and anxiety

7–8	9–11	12–16	17+
Net discovery Usage growing		**Net exploration and excitement** Usage peaking	**Net resource and proficiency** Social networking declining slightly
Primarily 'fun' Also some homework/research Usage and exploration increasing		Primarily research and communication, but also 'fun' Friends and socialising online important	Primarily research Then communication and small amounts of gaming unless a committed gamer
Initially basic parental concerns Growing safety concerns Parents may not be up to speed with behaviour and activity however Greatest parental influence and impact		Parental concerns increasing due to increased exploration, socialisation 'Teenage' concerns and relationship change Peer pressure concerns	Still some parental concerns But greater trust and belief in sensible behaviour

Parental concern peaking

Parental influence and knowledge decreasing

3.6 Increasing exploration beyond the sites that parents have selected for their children seems to start at around age 7 or 8. Often children have a sense that they are transgressing boundaries without their parent's full knowledge and some feel anxious about this. There is a sense of nervousness about accidentally doing something wrong or dangerous at this age amongst some children:

"I'm worried I'll get lost on the internet and find I've suddenly got a job in the army or something."

(9 year old boy)

3.7 In this age group children's awareness of risks and their own levels of anxiety tend to reflect the level of concern that their parents have about the internet. They also display some basic awareness that there is material they might not want to see online – 'rude sites' or 'something scary' – and some give examples of things they have seen which have made them feel uncomfortable and express worries about their parents catching them looking at something they have come across accidentally.

> **Portraits of younger primary school aged children (7-9 years)**
>
> Robert is 7 years old and has a younger sister. He is relatively 'young' and naïve, into playing car games and has only dabbled with the internet. He is oblivious to any risks or negatives associated with the internet. Parenting style is relaxed and he is not aware of management strategies, although subtle controls are in place, for example, a limit on screen time. He only goes on a couple of websites which his parents have introduced him to. He is unaware of other sites.
>
> Andrew is also 7 years old and has an older sister aged 9. His parents have a very controlled parenting style: half an hour screen time, four times a week (TV, games etc) and they are typically running from one extra curricula activity to another. He has exaggerated fears of the internet and gaming. He is very aware of the need to be cautious and worries that someone is watching him on the internet. He likes to play violent games but believes it stops you from being clever. He does show some signs of rebellion against these controls – for example, playing action games without his parents' permission when he is feeling angry with them.
>
> (NB. All names have been changed.)

3.8 These age-related changes in internet use are also reflected in increasing parental concerns about the online world, and in the case of those parents with less experience of using technology, a declining sense of efficacy in managing their children's internet experience. A number of children evidently enjoy this shift in the balance of power with their parents and place a lot of value on having control over something in their lives.

"It makes you feel like: 'Look up at me. All bow.'"

(12 year old girl)

3.9 However, it also means that children are not always confident about going to their parents with online problems, either because they won't know what to do or because they fear that their parents won't really understand and might overreact.

"I wouldn't listen to my parents anyway, as they don't know enough."

(17 year old girl)

3.10 Both children and parents also express concern about the credibility of sources and not knowing what can be trusted online.

3.11 The influence of siblings came out strongly in my research. Older brothers and sisters often introduce their younger siblings to new websites, games and online experiences. They are usually very responsible guides – watching out for their brothers or sisters and teaching them how to use the internet safely. But some older children are worried about what their siblings might see or experience, possibly because of their own increasing awareness of the possibilities and risks 'out there' on the internet.

3.12 For teenagers the internet is integral to social life, becoming a substitute for going out. They are aware of the risks through experience, or having heard about them from peers, teachers and parents, and acknowledge that they could stumble across inappropriate material. However, 11-16 year olds are confident that if they do end up somewhere they don't want to be, they can just 'click away'. They tended to view social issues such as cyberbullying as a more direct concern:

"It's easier to say horrible stuff about people on [the internet]. It got really horrible in Year 10. Lots of people were being bullying over [the internet]. It gets brought into school. When friends do this, it's horrible. It makes you really upset. You don't want to go into school again."

(15 year old girl, Cardiff)

3.13 Younger secondary school children are aware of the risks but are less actively concerned about them and feel confident in their online choices and behaviour, citing the usual rules about personal information and contact from strangers. Indeed most of the children we spoke to, apart from the youngest seven year olds, appeared aware of basic safety issues. While this might appear reassuring, there are indications that children might be masking their own risky behaviour, especially when they speak about their peer group not being sensible online. There are also occasional indications that some children did not recognise a potentially dangerous situation, unwittingly giving out personal information for example.

3.14 Reliance on the internet for socialising declines amongst older teenagers who were simply going out more. However, they also appear to be taking active steps to keep their parents at a distance from their online activity, resisting attempts by their parents to find out what they are doing and seeing on the internet. Multi-tasking is common, with young people using chat functions whilst doing their homework and able to quickly shield this from parental view.

Parents' views on the internet

3.15 In general my focus groups found that parents have more concerns about the internet than gaming – often because they don't really know what their children are doing online and how to manage any potential risks. Having said that, most parents are more concerned about other issues, like safety outside the home and their children 'growing up too fast'. Indeed some parents did not raise 'the internet' as a spontaneous concern until prompted to think about it in more detail by others in the group. Once parents start to discuss the potential risks they acknowledge that many of these mirror the outside world and begin to wonder whether they should be more concerned. There is some evidence of scare stories overwriting real experiences – with parents shifting from no concern to focusing on the most extreme forms of potential risk. Combined screen time (including other media use) is also a big issue, in terms of health, wellbeing and the impact it can have on family interaction.

3.16 Nevertheless, for many parents internet risk remains an abstract concern unless they or their children have actually had a bad experience. This is reflected in the fairly ad hoc way that rules around internet use appear to develop within families.

> **Kayleigh's experience**
>
> Kayleigh is 9 years old and is mainly messaging with her friends, which has been a recent passion over the last few months. She also goes to doll dressing sites, which her parents were initially relaxed about but have now started to worry about. The sites appeared innocent, but they found that older people (male and female) were joining in the chat on the sites. Her parents were concerned that some of the chat (and some of the underwear) was very sexual. They now supervise her more closely and limit her to playing on the family computer in the dining room.

3.17   Parents are positive about the internet – because their children can use it from the 'safety' of home and it is seen as a good research and communication tool. However, they lament the loss of traditional research skills and worry about both the trustworthiness and appropriateness of content and the effect of internet use on their children's interpersonal skills and health.

3.18   As well as recognising the benefits, both parents and children have concerns about the 'unpleasant side effects' of the internet like cyberbullying, which they attribute in part to the absence of face to face contact which would otherwise constrain behaviour. They tend to be more protective over girls' vulnerability to online predators and more relaxed about boys accessing 'questionable' material online. Nevertheless, parents are worried about the emotional impact of some of the material that their children might come across, particularly about how it might affect their view of the world and their ideas about what is and isn't socially acceptable, particularly where material is presented as 'just being funny'.

3.19   In this sample few parents expressed concern about sites encouraging potentially harmful activity (such as those promoting anorexia, suicide or terrorism). Most feel that these are only of concern for children who are already vulnerable.

3.20   In line with the findings from children about their changing internet use, my focus groups show increasing parental concern about safety online emerging towards the end of primary school. Sometimes this is coupled with a growing sense of distance from their children (possibly exacerbated by this being played out through technology that they don't understand) as well as concern about how they might begin experimenting and responding to peer pressure online during adolescence.

How do parents respond?

3.21   Some parents are clear that it is their responsibility to check how their children are behaving online. But experience of technology has a fundamental influence on how parents respond to this parenting challenge. Parents might chose to be more controlling or laid back in their parenting style but without confidence in using technology these approaches are undermined and parents are left feeling anxious, disengaged and more prone to having their concerns fuelled by scare stories.

3.22   Parents also seek to adapt their approach depending on other characteristics of their children, especially the age of the child and position in the family – where parents tend to be more controlling over use by young children and the first born – and also the personality of their child; with 'rebellious' children subject to greater controls. Experience

and hearsay are also crucial – knowing of, or having a negative experience often leads to putting more controls in place.

Findings from the academic literature

3.23 The advent of the internet has been greeted with an uneasy mixture of hopes and fears. There have been growing concerns about risks posed by online communication to children's safety. However, there are few people who would deny the power of the medium to release children's creativity and offer new opportunities for learning, culture and community participation. Certainly the debate in the field of the internet does not seem to have been as contentious as with video games (see Chapter 6).

3.24 Many of the issues that have traditionally been discussed around media influence on children are relevant to the internet, such as violence and its effect on behaviour and attitudes. However, the internet introduces new risks to children. There are several characteristics of the internet that might be seen to increase its potential for harm to children. These would include: ease of access for users; abundance of material available; ubiquity and affordability; the interactivity of the medium; the potential for individual users to share material; the degree of anonymity that users can enjoy; and the lack of 'gate-keepers' or authorities that might restrict access. Benefits of the medium include: facilitating learning; communication; and civic participation (Bentivegna, 2002).

3.25 Web 2.0 is a term referring to the increasing use of the internet by individuals to create and distribute their own content, in audio-visual as well as written form. Specific examples of Web 2.0 services include:

- **User generated content** sites such as wikis, blogs and image-sharing sites, which are designed specifically for users to upload, share or view content.

- **Social networking sites**, where users display their personal 'profile', including information such as where they live, interests and tastes (for example in music, films or books) as well as photos or videos, music tracks and links to friends' profiles. They may also include facilities for chat, file sharing, blogging and discussion groups.

- **Online communities and social worlds**, where participants select, customise or create characters, called 'avatars'. Their avatars can build houses, furnish environments, interact with others and even exchange virtual money while purchasing and selling items in a multi-player virtual world.

- **Online gaming –** here players often play with others in complex and extensive 'game worlds' where players can interact and talk to each other during play.

3.26 Frequently, these categories overlap. For example, in Club Penguin – a site mainly aimed at younger children – users adopt an avatar in the form of a brightly coloured penguin, which can explore a virtual Antarctic landscape in which they can build igloos, chat, make friends and play games with other users' penguins. So Club Penguin can be said to have features of a social networking site, an online community/social world and an online gaming site.

3.27 These networking sites are increasingly being seen as part of youth culture. In the US it seems over half of all teenagers who have access to the internet use social networking sites (Lenhart and Madden, 2007). In the UK 49% of 8-17 year-old said they had a profile on a social networking site (Ofcom, 2008).

3.28 Research directly related to the internet, particularly regarding new ways of using technology (such as social networking sites) is very limited. Much of the work that is considered 'evidence' is descriptive and draws on more speculative and non-academic accounts, some of which have yet to be published (so-called 'grey literature'). Mainstream communications research has generally avoided the experimental approaches employed in relation to games, tending instead to use large-scale questionnaire surveys to map patterns of access and use in terms of the likelihood that children will encounter inappropriate material or experience inappropriate contact (e.g. Center for the Digital Future, 2007; Lenhart, Rainie and Lewis, 2001; Livingstone and Bober, 2004; Mitchell, Finkelhor and Wolak, 2003). However, very little is known about how the child interprets the material or what impact it might have on children's social or cognitive development.

3.29 Some research has been done by media and cultural studies researchers but this tends to be smaller-scale qualitative research with a focus on how families or specific groups of children interact and make sense of what they encounter online (e.g. Buckingham and Willett, 2006; Facer , Furlong, Furlong and Sutherland 2003; Holloway and Valentine, 2003; Weber and Dixon, 2007).

Risks

3.30 To help give some structure to the potentially broad ranging set of factors that constitute risk from the internet, we have classified risk according to a structure put forward by EU Kids Online project (Hasebrink, Livingstone, Haddon, Kirwil and Ponte, 2007). This makes the distinction between risks from content, contact and conduct. This is offered with the caveat that there is no easy line to draw between opportunities and risks on the internet (see discussion in Chapter 1). Often what adults may consider a risk, a child may see as an opportunity and furthermore sometimes it is clear that one child's risk can be perceived by another child as an opportunity (Livingstone, forthcoming).

Content Risks

3.31 There is little doubt that the internet has increased the availability and accessibility of content to children that in most other aspects of life is regulated or they are protected from. Content that would be on the top shelf in a newsagent or after the 9pm watershed can potentially be accessed on the internet. Ofcom (2008) found that 66% of parents have some concerns about content on the internet. In contrast, 30% of children aged 8-17 say they had concerns. In general parents are more concerned about all issues than their children.

Sexual content

3.32 Much of the debate related to content on the internet is concerned with sexual content. One of the problems with this area is defining some forms of pornography. What is seen as sex education or health related by some people is seen as pornography by others.

The internet has undoubtedly increased children's exposure to sexually explicit material

3.33   The internet has undoubtedly made it easier to distribute, obtain and for children to come across pornography either accidentally or on purpose. Livingstone and Bober (2005) report that 57% of 9-19 year-olds have come into contact with online pornography. Of these, 38% have seen a pornographic pop-up advert whilst doing something else, 36% have accidentally stumbled upon a pornographic website, 25% have received unsolicited pornographic material by email or instant messaging and 10% admit to having visited a pornographic website on purpose. These high figures are echoed across a number of studies in Europe (see Millwood Hargrave and Livingstone, 2006) and in the US, where 34% of young people said they had seen sexual material accidentally (Wolak, Mitchell and Finkelhor, 2007).

3.34   Recent research by Ofcom found sexual content to be one of the two biggest issues concerning parents of 8-17 year olds (37%) and was mentioned by 28% of 8-17 year olds as the issue they are most concerned about with the internet (Millwood Hargrave and Livingstone, 2006).

Little is known about the consequences for children of seeing sexually explicit content but research with adults suggests there is an effect on behaviour and attitudes

3.35   The question of what the consequences are of children having more access to this kind of material, such as the implications for their sexual or psychological health, is harder to answer and not well researched, partly because of the ethical issues involved in such research. Ethnographic research also has the problem of not being able to control the kind of content viewed, where the range might be considerable, and experiences are self-reported.

3.36   Research that has been done suggests that:

●   around half of the children sampled in a range of research studies are not especially bothered by such material

●   a minority (particularly boys and older children) actively seek it out

●   a sizeable minority do not like it, and do not wish to see it

●   children will typically report that they are distressed, disgusted, offended or bothered by sexually explicit material

●   few children (as few as 16%) tell their parents when they do encounter it

(Millwood Hargrave and Livingstone, 2006, 2008; ECPAT, 2005; Livingstone and Bober, 2005)

3.37   It is hard to draw any firm conclusions from the body of 'psychological effects' research as it is small and findings directly contradict each other. A major review of the field carried out by the US National Research Council (Thornburgh and Lin, 2002) found a lack of scientific consensus on the effects of sexually explicit material on children. However, a recent study looking at pornography and its effects on adults did find evidence of effects, including on attitudes, beliefs, fantasies, desires and behaviour of those who use it (Itzin, Taket and Kelly, 2007).

3.38   The effect of seeing inappropriate sexual content on children of different ages is unlikely to be linear – i.e. I would not predict a greater or lesser impact with age. Rather it is likely that for young children, inappropriate images would not fit into their schemas (ideas) about the world. However, for children who are just beginning to develop their understanding of sexual development and explore their own sexuality, the impact could be greater and have a negative effect on the course of that growing set of ideas and their sexual health more generally. As with other types of media influence, the perspectives and background the young person brings to the experience, along with his or her cognitive, social and even physical development will influence the 'effect' that such an exposure would have.

There is a small but accumulating body of evidence showing a link between exposure to sexually explicit material and negative beliefs and attitudes, although this research cannot decipher the direction of causality

3.39   There is a growing body of evidence on the effects of sexually explicit material on attitudes, values and beliefs. Peter and Valkenburg (2006) have found correlations between exposure to sexually explicit online content and attitudes towards sex such as respect for women and understanding of sex as related to love. This was found in the Netherlands and was particularly in relation to male adolescents. Ybarra and Mitchell (2005) has also found an association between the use of pornography and depression. Some very recent research is beginning to show an association between exposure to pornography and attitudes towards sexual exploitation along with pro-rape attitudes, beliefs and behaviours in adults (Itzin et al, 2007; Shim, Lee and Paul, 2007). All of this research is correlational and therefore does not prove causality, but it constitutes a small but increasing body of research demonstrating a relationship between exposure to sexually inappropriate material and the development and validation of negative beliefs and ideas.

3.40   The American Psychological Association taskforce recently published a paper which examined the sexualised messages targeting girls across the media and found negative cognitive, emotional and attitudinal consequences of this increased sexualisation (Zurbriggen, Collings, Lam, Roberts, Tolman, Ward and Blake, 2007). Increased exposure to such content on the internet is likely to contribute to this.

3.41   Child abuse images are in a very different category from adult pornography, and outside the scope of this Review. However, there is little doubt that the rise of the internet has been associated with a significant increase in the production and distribution of such images (Taylor and Quayle, 2003).

Commercial content

The internet has increased children's exposure to commercial content and findings are mixed about how they interpret this, although we know from brain development research that pre-adolescent children are not equipped with the skills to interpret some material

3.42 One of the concerns about the internet in recent years has been the increase in commercialisation and children's vulnerability to persuasion or exploitation. One important question is how young people filter genuine content from advertising. Commercial advertising is abundant on the internet and there are issues of the potential impact of this on children.

3.43 There are questions relating to children's vulnerability to persuasion or exploitation not just from advertising but from content more generally. The small amount of research that has been done shows that young people seem very good at ignoring advertising (Chester and Montgomery, 2007) . They often show considerable cynicism about it (Buckingham, 1993) and are critical of mainstream advertising (Seiter, 2005). However, another study found that children tend to believe content on sites that include advertising (Eastin, Greenberg and Hofschire, 2006) and another, that children are confused by the blurring of advertising and content (European Research into Consumer Affairs report, 2001).

3.44 The wider evidence on children's engagement with the commercial world is a topic of a separate Government assessment (see paragraph 4.40) and is not therefore covered in detail here except to highlight it as a potential source of inappropriate material for children.

Evaluating content online is a crucial skill that children will inherently get better at (due to brain development), but they still need guidance from adults as they develop these skills

3.45 Research looking at young people's awareness of advertising does not appear to be age-discriminate. However, age is likely to be a crucial factor in predicting a child's ability to judge the source of the information obtained. As discussed in Chapter 2, the part of the brain that is responsible for making critical evaluations about information, such as judging the source of a message – the frontal cortex – is under-developed during early childhood and undergoes significant development during the adolescent years to reach maturity by the time a child reaches adulthood (Johnson, 2008). During the pre-adolescent years, therefore, the child is not able to use context to interpret the reliability of information like older children or adults can.

3.46 The internet offers an enormous range of information of differing nature and quality, with fewer gate-keepers or editorial checks than those which exist in the print media. Moreover, there is now the ability for users to create, upload and share their own content. Over and above the question of whether content is appropriate or not for children, there are risks involved in children not being able to determine for themselves the quality of content. Surveys of children between the ages of 9-19 show that children are confused by whether information is trustworthy (Livingstone and Bober, 2005).

Contact and Conduct Risks

3.47   One of the biggest changes from Web 1.0 to Web 2.0 is increasing interactivity. Communication is now possible one-to-one, one-to-many and many-to-many. This clearly offers enormous potential opportunities but also increasing concerns about the vulnerability of users, especially children. There are issues of unwanted contact and cyberbullying. Moreover, in some areas of the internet – some social networking sites, for example – there is less age-grouping than there would be in life amongst circles of friends offline. This potential for vertical grouping (younger and older children together) poses new risks and challenges for appropriateness of contact.

3.48   The distinction between contact and conduct is useful in order to offer some structure when thinking about issues of risk from the internet. However, there is significant overlap between the two and for the purposes of reviewing the evidence the two have been merged here. The key distinction is that:

- 'contact' refers to a situation in which the child is the receiver of the communication/ message (the 'victim')

- 'conduct' refers to a situation where the child is the instigator of the inappropriate behaviour (the 'perpetrator')

3.49   The same child can be in both roles at different times.

Stranger danger

There is little doubt that the internet has increased the risk of strangers contacting children

3.50   Research shows that young people value the internet as a particularly enabling environment for intimate or private communications (Livingstone and Helsper, 2007). Moreover, recent evidence suggests children prefer to communicate with friends rather than strangers (Mediappro, 2007). However, one of the greatest risks related to contact on the internet is so-called 'stranger danger' – that is, the possibility of threatening contact from unknown adults, particularly sexual predators. It would be naïve to deny that the internet has provided predators with new opportunities for contact with children; these risks may have increased with the advent of mobile platforms (O'Connell, 2003). Adults masquerading as younger people is one of the biggest issues parents say they are most concerned about with the internet (Ofcom, 2008).

3.51   There is a particular risk of 'grooming' practices through popular online services such as instant messaging and social networking sites with strangers using them to make contact with under-age girls, sometimes by adopting a fake persona (CEOP, 2007). Usual rules around friendships and trust are changed making it harder to discern true 'friends' from strangers in this context (Livingstone, 2008).

3.52   As with other areas of the internet, research tells us descriptively about whether and how many children have contact with strangers online, but we know relatively little about the nature of contact with strangers online or how children respond to it.

A significant proportion of young people have been contacted by strangers online

3.53   Research around the world has shown that there are a significant number of young people that have been contacted by strangers online. Some 31% of 9-19 year-olds who go online at least weekly, report having received unwanted sexual comments via email, chat, instant messenger or text message (Livingstone and Bober, 2005). Peter, Valkenburg and Schouten (2006) found age to be a discriminating factor, with 12-14 year olds tending to talk to strangers online more than older teenagers. This fits with what we know about younger children's immaturities in their limited ability to understand the complexities of relationships with others or discriminate between acquaintances, friends of friends and strangers.

Incidents of children meeting people offline who they first met online is still worryingly high despite an increased awareness among young people of the dangers

3.54   National surveys show that there may be an increasing awareness of the potential dangers of meeting strangers in person who are only known from online contact (Millwood Hargrave and Livingstone, 2008). However, there is still a high proportion of young people who do so, suggesting some lack of clarity about who is a friend, acquaintance or stranger. CEOP (2007) found that 25% of children and young people have met someone offline that they first made contact with online. Studies from other countries around the world show a similar rate of young people meeting strangers offline who they have met online (e.g. 22% in Norway; Millwood Hargrave and Livingstone, 2008).

3.55   Livingstone (2003) points out that "the link between risks, incidents and actual harm is genuinely tenuous" in relation to potential harm from strangers; making the point that the number of incidents of harm from strangers compared to the level of contact is low – sometimes the strangers really are just other children who want to make friends. And it remains the case that very few abusers of children are strangers to them (Cawson, Wattam, Brooker and Kelly, 2000). We must treat the threat of online predators with the seriousness is deserves while at the same time not losing sight of other risks posed to children, both offline and online.

An increased awareness of risks doesn't necessarily curtail young people's risk taking behaviour

3.56   Recent research has shown that an increased awareness of potential risks does not seem to prevent the majority of children or young people from making such contacts (Millwood Hargrave and Livingstone, 2008). This has implications for how we advise parents to manage risk. Teenagers push normative boundaries and take risks as part of identity formation (Hope, 2007) and this behaviour has a developmental imperative (see Chapter 2). This means that sometimes, knowing something is a risk may increase the desire to seek it out. This is a particular issue for young people in the early adolescent years where they need a degree of independence and less restriction from parents in order to undertake the challenges of their stage of development, but their frontal lobes are still under-developed, dampening their ability to make critical evaluations. This combination of somewhat immature critical evaluation skills and a drive for risk taking behaviour is potentially dangerous and means that education and information about the issues, effectively targeted at changing behaviour such as contact from strangers, is crucial.

Vulnerable people offline are also more vulnerable online, although risks online are not only associated with social deprivation

3.57   There is some evidence that those dissatisfied with their offline lives are at increased risk of physical and psychological abuse related to meeting strangers online (SAFT, 2006). In addition, a desire to meet new people and seek out entertainment has also been found to lead to such interaction (Peter et al, 2006).

3.58   Livingstone and Helsper (2007) looked at social psychological factors in young people in relation to vulnerability online. They found that youngsters who are somewhat dissatisfied with life are sensation-seeking, or who have poor relationships with parents are those that are more likely to encounter online communication risks. Low life satisfaction is a predictor of who will make online friends or meet with strangers.

3.59   Research shows a complex dynamic between deprivation and online risks. Livingstone, Bober and Helsper (2005) have shown that internet risks are not neatly associated with measures of deprivation. Those with more access to the internet (usually those from more privileged backgrounds) encounter more risks. However, other research highlights that children from more deprived backgrounds may also be at risk online because of a lack of parental supervision and confidence with new technology (UK online/ICM, 2007).

Bullying

The nature of bullying changes when online, making it anonymous and potentially more damaging

3.60   Bullying is something that happens in the offline world and needs to be tackled. Cyberbullying refers to bullying behaviour that takes place through electronic means such as sending threatening text messages, posting unpleasant things about people, and circulating unpleasant pictures or videos of someone. Cyberbullying can be particularly upsetting and damaging because it spreads more widely, with a greater degree of publicity; it can contain damaging visual images or hurtful words; it is available 24 hours a day; it can infiltrate the victim's privacy and the 'safe' place of home; and personal information can be manipulated, visual images altered and these then passed on to others. Moreover, it can be carried out anonymously.

3.61   One issue that is important to consider is how we define bullying in order to attempt a degree of proportionality. Some incidents might be considered mild teasing while at the other extreme, bullying behaviour can be extremely damaging to the victim and may involve the commission of a criminal offence.

Parents are worried about cyberbullying, but offline bullying is still more prevalent than cyberbullying (although this has the potential to increase)

3.62   According to Ofcom's recent (2008) survey, 29% of parents say they are concerned about bullying online with 22% mentioning 'happy slapping' (where a victim is filmed whilst being assaulted) and a further 8% mentioning the misuse of camera phones. However, 56% of parents of 8-17 year olds say they are more concerned about bullying offline than bullying via the internet.

3.63   The descriptive research data that exists in recent years shows that cyberbullying is a problem, but bullying offline is a greater problem. The National Bullying Survey (Bullying Online 2006) found that 69% of children reported having been bullied but only 7% were through emails, texts or instant messaging. With the advent of social networking sites and user generated content, there is the potential for this to increase.

3.64   Millwood Hargrave and Livingstone (2008) make reference to recent research on online harassment which suggests that certain online behaviours (talking about sex online, making rude comments) increase the risk of victimisation online.

There are qualitative differences in the way people behave online and children need clear guidance on this

3.65   A key issue around cyberbullying is the distance that technology permits between the perpetrator and the victim. For example, when sending a bullying text or posting it during an online discussion, the bully does not actually see the painful impact on their target and the real harm they do (Campbell, 2005). Communications online are affected by restricted sensory input – the interaction lacks the usual social cues of facial expression, voice intonation etc. Moreover, language can convey unintended messages and emotions and is much more open to incorrect interpretation as there are not the usual cues to assess the other person's reaction (i.e. a person's physical response to a situation).

3.66   Research with adults is beginning to show that while in some ways interactions online mirror people's everyday lives – who they interact with, the interests they share etc. – there are certain characteristics of communication that change online so that behaviours may be enhanced or subdued. In short, people act differently online than they would in physical settings. They do and say things online that they would not do offline and do not necessarily act according to their usual moral conscience (i.e. the concept of truth and lies can change in online communications; Whitty and Johnson, in press). This applies to communications between people known to each other as well as strangers.

3.67   Indeed, this process is more complicated for children who are still in the process of learning about the rights and wrongs of social interaction in the real world – what is appropriate or not; how others react and feel when they do or say something. Interactions online can seem somewhat unreal to children, both in terms of what they interpret (as the receiver of the message) and what they send out (the imparter of the message). Forty percent of children say they have pretended things about themselves online (Livingstone and Bober, 2005) which is an indication that they may be getting the message that it is acceptable to behave differently in the virtual world. Equipping children with the skills to appropriately impart messages to others is as important as helping them know how to interpret and cope with those they receive.

Harmful sites

The opportunity for marginalised groups to spread information that may seem harmful has undoubtedly increased with the internet, but the effect of this on individuals attitudes, beliefs or behaviour is still unclear

3.68   The internet has undoubtedly offered a forum for marginalized groups or those with niche interests to share content and distribute material. Some of this is potentially

harmful or may encourage harmful behaviours in young people such as pro-suicide sites and 'hate sites'. Again research evidence on the scale and effects of this is lacking. Moreover, it is hard to determine the cases where such sites are harmful and situations in which they are beneficial.

3.69 Research looking at pro-suicide sites has had mixed results. Some studies report high degrees of emotional and social support by these sites (Gilat and Shahar, 2007) particularly on sites where the methods of suicide were not discussed (Winkel, Groen and Petermann, 2005). However, one study found that undergraduates who had been in a group that had been shown pro-anorexia content exhibited more negative attitudes towards themselves (Bardone-Cone and Cass, 2007). More studies like this are needed to begin to understand the impact of such sites on those who spontaneously choose to access them.

3.70 'Hate sites' clearly contain inappropriate material that certainly would be considered offensive by many. However, again very little evidence exists about their impact on people, emotionally or behaviourally. Concerns include whether they might act as recruitment tools (Chaudhry, 2000). However, it's also possible that they might encourage critical attitudes towards such content (Bevort and Breda, 2001).

3.71 The internet offers online or 'virtual' communities. Some of these are text-based (e.g. forums, chatrooms, bulletin boards) where participants meet and discuss common problems. Many of the concerns around these communities mirror those with social networking sites and other social sites, such as concerns about websites encouraging anorexia and bulimia (new-medical.net, 2006). There are also concerns about greater access to 'hate speech' or other anti-social content (neo-Nazi or pro-anorexia groups, for example). These social sites provide an opportunity for spreading information one-to-many which are much harder to find in the offline world. In the recent past there have also been reported cases of suicide pacts (or 'net suicide') where vulnerable young people meet online and share a pact to commit suicide (Naito, 2007).

3.72 Once again it is important to reiterate that harmful sites present more risks to children given the difficulties children have evaluating the quality, purpose and reliability of websites. Equally, however, these spaces may offer vulnerable young people the opportunity to talk through the problems they face in an understanding and supportive environment.

Commercial contact

There is the potential for commercial organisations to target children with potentially inappropriate or exploitative information and evidence that this is happening on the internet

3.73 Commercial organisations can exploit the internet to track the online behaviour of children (and others) with the potential for exploitation. Pop-up adverts are a feature of the internet and are one of the biggest concerns mentioned by children (Ofcom, 2008), being cited by them as the most likely source of pornographic images (Livingstone and Bober, 2005). In terms of how advertising is perceived by youngsters, there is evidence that it is seen as an invasion of privacy and, according to one study, 95% of teenagers in the UK are concerned that personal information is being passed onto advertisers or other websites (Davies, 2007).

3.74   Other concerns relating to commercial contact are the potential for exploitation through 'data mining' information on user pages, 'hypo-targeting' individual users, the offer of incentives for users to engage with companies and recent "conversational advertising" and the potential for identity theft (Davies, 2007; Gross and Acquisti, 2005). Various companies have established their own pages on social networking sites in an attempt to capture a young audience.

3.75   These factors all concern the potential infringement of privacy and potential exploitation of children. Given what we know about children's difficulties with evaluating both the content and source of information while their brains are still developing the appropriate skills, it is clear that this kind of contact presents a potential risk to children.

New issues of trust and credibility are presented by the internet

3.76   Both in relation to content and contact, the internet presents new issues of trust and credibility. These issues are particularly relevant in the context of new social networking services. With many people becoming someone's 'friend' online, or joining someone's circle of friends, this implies an online relationship that may not be appropriate. When such trust is established on a false basis and then intentionally broken, this could cause emotional harm. Again, children are most vulnerable to confusion with such a complex set of social judgements to make.

Personal information

Young people are posting personal information online and do not necessarily understand the short or longer-term implications of this

3.77   New media forms such as social networking sites are a place where young people can post private information that is accessible by others and this poses possible risks to young people. Research shows that 46% of children say they have given out personal information to someone they met online (Livingstone and Bober, 2005). Again the issue of proportionality is important and exactly what they are posting and where is critical.

3.78   Key concerns related to this ability to 'publish' personal information online are: how young people are presenting themselves, their peers and other material for comment; and how young people understand the immediate or long-term impacts of such representations on other individuals or social groups (Jenkins et al, 2007).

3.79   There is clear potential for the misuse of personal information in a context where many teenagers allow intimate information (e.g. photos, addresses, telephone numbers, places they like to spend time) to be available to many casual acquaintances (Barnes, 2006). This includes the potential for identity theft and other forms of deception, but also the potential for predators to seek out personal information of young people or for bullying. Moreover, personal information available online is now being used by employers and so may have implications for young people's reputations and career prospects in later life, though young people are not necessarily aware that they leave this kind of 'digital footprint' (Hinduga and Patchin, in press).

3.80 A recent study found that almost 40% of young people set their social networking profiles to 'private' (Hinduja and Patchin, in press) but this leaves a substantial proportion who do not. Related to this are issues of consent, with 27% of young people admitting to having posted information or photos of others without their consent (Get Safe Online, 2007).

Conclusions on risks

3.81 There seems little doubt that there are new and in some cases increased risks presented to children and young people by the internet. Web 2.0 presents particular issues not just in terms of content but also contact and conduct. The concrete 'evidence' of harm resulting from the internet is fairly limited; partly because of the fast growing nature of the technology; partly because of the ethics involved in carrying out research with young people; and partly because of the difficulties with measuring 'effects' that are independent of the person's own history, experience and context (see Chapters 2 and 6).

3.82 Data is beginning to reveal risks to young people in terms of increased exposure to sexually inappropriate content, contributions to negative beliefs and attitudes, stranger danger, cyberbullying and access to inappropriate content from harmful sites. Moreover, there are issues relating to commercial content and contact with young people (Buckingham, 2008).

3.83 What is clear is that while internet risks can reflect 'offline' concerns (e.g. bullying) the problems can be qualitatively different and sometimes have the potential to be more damaging. This is due to the nature of the internet with its anonymity, ubiquity and communication potential. Research is beginning to reveal that people act differently on the internet and can alter their moral code in the absence of face-to-face communication and with a lack of gate-keepers. This is potentially more complex for children and young people, who are still trying to establish the social rules of the offline world and lack the critical evaluation skills to either be able to interpret incoming information or make appropriate judgements about sending information to others.

3.84 Any discussion of the impact of the internet on children needs to consider issues of risk (since risks are so closely correlated with the potential benefits) and proportionality in how we respond (since problems vary in their severity).

3.85 In answer to concerns that the internet is responsible for a growing range of social problems, there is very little evidence to support this, but rather current research and theoretical understanding of media effects indicate the need for qualified and context-dependent conclusions. Conversely, it is implausible to think that the internet is having no impact on children, since it is increasingly embedded within so much of their and all of our lives (Millwood Hargrave and Livingstone, 2006).

3.86 I am clear that the impact is very much context-bound and related to the previous experiences of the child and the context of the interaction. However, given what we know about children's brain and functional development, we need to offer support to their under-developed abilities (critical evaluation; lack of inhibition; ability to judge sources of information and make socially appropriate decisions). This support needs to change as children's abilities develop.

Benefits

3.87   The potential benefits of the internet have been hailed by many from its inception. There is no doubt that its accessibility, global reach, simplicity and flexibility, not to mention the vast extent of material it brings together, offers enormous opportunities for children and young people.

3.88   Tapscott (1998) talks of the 'digital generation' and the liberating potential of the internet for young people. However, others temper this with the reality that most young people say they use the networking potential of the internet to reinforce local networks among peers, rather than extend their global connections (e.g. Buckingham, 2008; Herring, 2008).

3.89   The four key areas of benefit can be divided into: education, learning and cognitive skills; participation and civic engagement; creativity; and identity and social connection. Many of these benefits come from the new Web 2.0 opportunities such as social networking sites and user generated content platforms. Research suggests that any benefits depend very much on the social and educational context in which the technology is used.

Education and learning

3.90   From the beginning, the value of the internet in terms of instant access to information has been evident. This has been translated into discussions of the educational potential of the internet. However, it is clear that the educational benefits of the internet are not automatic or guaranteed but derive from the ways in which the technology is used (Buckingham, 2008). The technology itself is not transformative, it is the school (the pedagogy) that is transformative. That said, the technology can provide a platform for learning amongst children who have struggled to engage with school. For example, Notschool.net is a virtual online community offering an alternative to traditional education for young people who, for a variety of reasons, can no longer cope with school or with complementary provisions such as home tutoring or specialist units.

3.91   Other benefits in terms of learning are the ability for individuals to develop a new 'set of cultural competencies and social skills' (appropriation, multitasking, collective intelligence, judgment, networking and negotiation; Jenkins et al, 2007). Moreover, many researchers discuss the learning benefits open to users in terms of developing skills at making judgments about content and other critical evaluation skills (Jenkins, 2006a; Ito, in press; Gee, 2003). These are precisely the skills children and young people need to develop and hence perhaps offer more potential benefits in this area than they do to adults.

Participation and civic engagement

3.92   The internet is seen as a place for creating new forms of communication and community, particularly for building or renewing civic participation, generating tolerance and global understanding. Moreover, the internet can help young people who might otherwise be limited to face-to-face interactions in smaller communities or in communities in which they have a minority interest (a particular musical style or a political view, for example). One of the greatest benefits of user generated content sites is that they offer young people spaces in which they can 'have a voice'.

Creativity

3.93 The internet offers enormous opportunities for creative expression which can bring benefits in terms of culture and children's imaginative life. Children can create and play out new images, dramatics and narratives in ways that were predominantly only available to them before as consumers (of books, theatre, cinema). Now the means to create using elaborate visual techniques has opened up to children and young people. Creative opportunities include:

- the opportunities for self-expression which are not possible to the same degree in face-to-face situations (written, musical and visual expression, for example);

- potential reach of social networks has been important to young artists as a way of developing an audience for their productions (for example, music, videos or animation);

- user generated content services offer the opportunity to create and distribute one's own media which is being hailed by some as providing the means to a more democratic media environment (Jenkins, 2006b), allowing people to share and build on each other's ideas and work.

3.94 Many of the academics I consulted for this review were keen to highlight the enormous window the internet offers into the cultural side of life.

Identity and social connection

3.95 The internet has been seen as a place where social isolation can be overcome. In particular, online communities have been presented as places where teens can receive valuable support, where they can communicate openly where they might feel uncomfortable in the real world. There is some evidence that health bulletin boards are used in such a way by teens (Suzuki and Calzo, 2004) where they can explore their emerging sexuality without the difficulties of a face-to-face exchange (Subrahmanyam, Greenfield and Tynes 2004; Hillier and Harrison, 2007).

3.96 It seems that one of the key roles of social networking sites in adolescence is in providing a place where young people can explore and develop their sense of identity and style: a place where they can 'play', often submitting false information and enjoying creative activity with friends (Livingstone, 2008). There are age related changes in how children and young people present themselves, with younger participants presenting more elaborate styles and older users presenting more authentic identities. Presentations on these websites also seem to be influenced by the friends who the young person is connected with (Boyd and Heer, 2006) underlining their role in identity formation.

3.97 Some of the key benefits of social networking sites are: being able to meet people with the same interests and find 'like-minded' communities; the ability to discuss sensitive issues anonymously in potentially supportive environments; and being able to overcome the disadvantages of some face-to-face environments in which there are unequal power relationships (for example, times when children's knowledge or opinion may not be respected).

Conclusions on benefits

3.98   The potential benefits of the internet for everyone, including children and young people, are enormous and include the possibility that children can improve some of the skills that are so crucial to their cognitive development (critical evaluation, judging sources of information) which could have far-reaching implications. Web 2.0 offers new opportunities for communication, participation and creativity to a degree never witnessed before, and inherent in these benefits is the ability to overcome many of the disadvantages and inequalities of real life, leading some to hail the internet as providing the means to a more democratic media environment.

Three Strategic Objectives for Child Internet Safety

3.99   I have classified the online risks to children in terms of content, contact and conduct. Realising our goals means achieving three objectives:

Objective 1: Reduce Availability – Reduce the availability of harmful and inappropriate content, the prevalence of harmful and inappropriate contact and the conduciveness of platforms to harmful and inappropriate conduct;
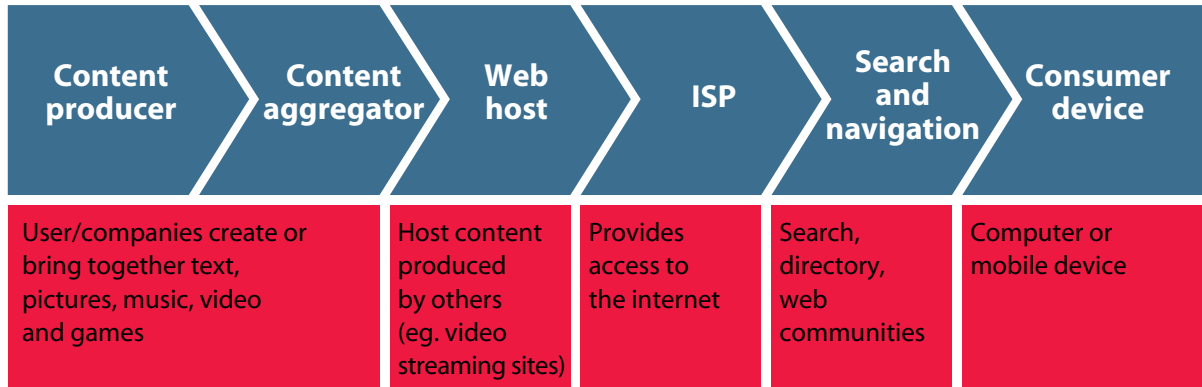
Objective 2: Restrict Access – Equip children and their parents to effectively manage access to harmful and inappropriate content, avoid incidences of harmful and inappropriate contact and reduce harmful and inappropriate conduct;

Objective 3: Increase Resilience – Equip children to deal with exposure to harmful and inappropriate content and contact, and equip parents to help their children deal with these things and parent effectively around incidences of harmful and inappropriate conduct by their children.

3.100   These objectives are interdependent. We will never be 100 per cent successful in achieving any of them, but through the right combination of successes against all of them, we *can* adequately manage the risks to children online. This argument can be set out as follows:

● The internet is a vast many-to-many network which allows users to communicate freely with others all over the world. It is this property which gives rise to many of the benefits of the internet, and which makes it such a powerful tool for innovation – ideas can be spread quickly, cheaply and freely.

● Another consequence of the nature of the internet is that there is no obvious single point at which editorial control can be exercised, unlike broadcast media where the channel exercises editorial control. Editorial controls exist (eg. moderators of user generated content sites) but they are widely dispersed across the 'value chain'. This means that it is very difficult for national Governments to reduce the availability of harmful and inappropriate material, since a crackdown in one country could just lead to the material being hosted elsewhere.

The internet value chain

Content producer >	Content aggregator >	Web host >	ISP >	Search and navigation >	Consumer device
User/companies create or bring together text, pictures, music, video and games		Host content produced by others (eg. video streaming sites)	Provides access to the internet	Search, directory, web communities	Computer or mobile device

- Many people conclude that the internet is too big and too dispersed for Government to effectively reduce the availability of harmful and inappropriate material.

- However, the majority of material accessed by internet users is hosted on a relatively small number of highly popular sites, the rest of it occupying a 'long tail' of less popular material (see diagram).

The 'long tail' of internet sites
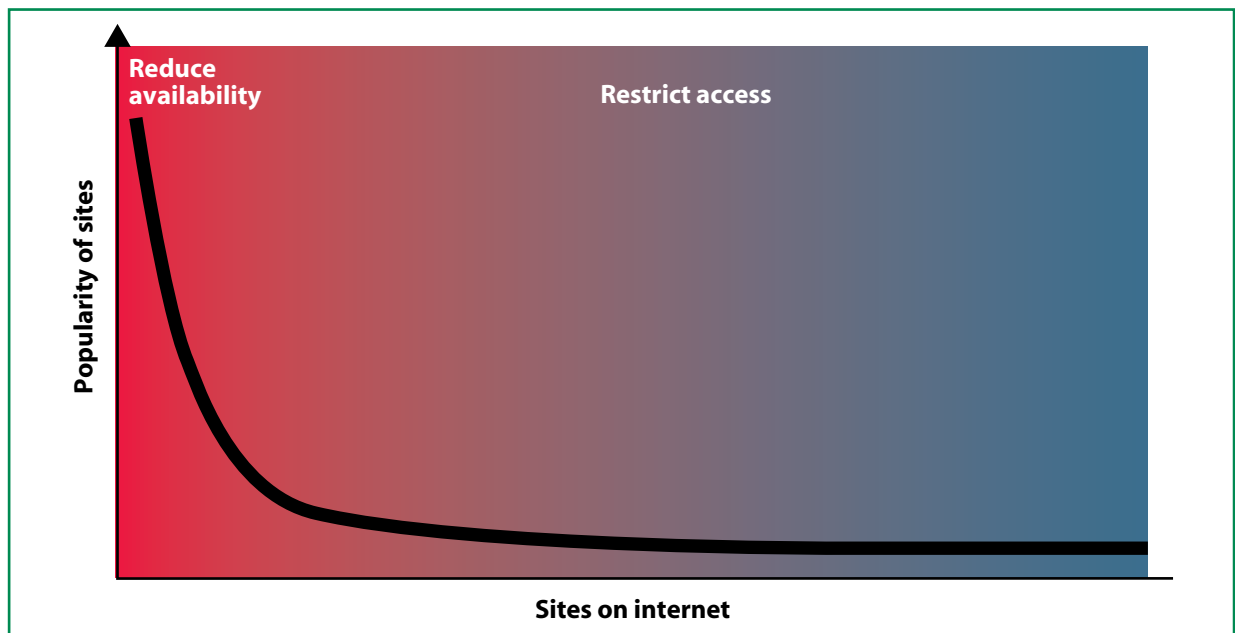
- A more realistic goal is for Government to concentrate on reducing the *availability* of harmful and inappropriate material in the most popular part of the internet (e.g. by influencing popular content hosts such as social networking sites) and helping parents to manage children's *access* to such material.

- There is a range of technical tools that can help parents manage their children's access to the internet (e.g. parental control software, safe search, age verification on websites).

- However, none of these tools represent a silver bullet and many of them only work effectively if users understand them. So, restricting children's access to harmful and inappropriate material is not just a question of what industry can do to protect children (eg. by developing better parental control software), but also of what parents can do to protect children (eg. by setting up parental control software properly) and what children can do to protect themselves (eg. by not giving out their contact details online).

- Just like in the offline world, no amount of effort to reduce the risks to children will eliminate those risks completely. We cannot make the internet completely safe. Because of this, we must also build children's resilience to the material to which they may be exposed.

3.101   The three objectives – reducing availability, restricting access and increasing resilience to harmful and inappropriate material online – are interdependent and complementary, but the people whose behaviour needs to change in order to achieve them varies. Although parents and children have a role in reducing availability of harmful and inappropriate material (eg. by reporting abuse to host sites), this is mainly a task for industry. And although industry do have a role in building children's resilience (eg. by providing safety advice), parents and others working with children are likely to have the most impact here and so have the greater responsibly. As I have said, where restricting access is concerned, achieving our objective is as much about how children and parents use safety features in the technology as it is about the safety features themselves. This overlapping, but differing role of industry and families across the three objectives is illustrated in the diagram below.

The role of industry and families

Reduce Availability   **Restrict Access**   **Increase Resilience**

Examples:
1. User generated content websites take down harmful and inappropriate material uploaded to their sites.
2. Children and parents report harmful and inappropriate material to host websites when they find it.
3. ISPs block access to illegal material such as child abuse images.
4. Parents install software to filter out harmful and inappropriate content.
5. Websites provide clear advice about how to stay safe in a prominent position.
6. Parents talk with their children and children talk with their friends and siblings about e-safety.

3.102 The interdependent and complementary nature of these objectives suggests a need for an overarching national strategy for child internet safety in the UK which is capable of influencing and empowering both industry and families.

Developing the right structures to lead a strategy for child internet safety

Work already in place

3.103 On the issues which are the focus of this review – content, contact and conduct which is potentially harmful or inappropriate but not necessarily illegal – there is range of activity already taking place. This is in addition to the significant activities of the Internet Watch Foundation to reduce the proliferation of child abuse images on the internet and the efforts of law enforcement agencies, including the Child Exploitation and Online Protection Centre (CEOP) to tackle online predators.

3.104 There is a good deal of work already taking place under the auspices of the Home Secretary's Taskforce on Child Protection on the Internet (HSTF).

Home Secretary's Taskforce on Child Protection on the Internet

The HSTF was formed in 2001 to bring together Government, online technology providers, statutory and non-statutory bodies, law enforcement and child protection specialists to work together to tackle issues relating to the protection of children on the internet.

The main HSTF meetings are chaired either by the Home Secretary, or by the Minister responsible for child protection. The Home Office provides the Secretariat function, with a Programme Board setting the direction of the taskforce. This is comprised of representatives from industry, charities, CEOP and government departments, and is led by a senior civil servant from the Home Office.

The bulk of the work of the HSTF is carried out by six sub-groups on: Criminal Law, Safety Measures, Public Awareness, Uptake of safety software, International co-operation and Education.

Achievements of the HSTF to date include: good practice guidance for Moderation of Interactive Services, Chat Services, Instant Messaging, Web-based Services, Search and the use of real life examples involving children or young people in public awareness campaigns; recommendations for changes to the Criminal Law; and the development of training for professionals involved in child protection. The taskforce also supported the creation of CEOP in 2006.

Three main pieces of work are currently being undertaken by the taskforce. These are: work to encourage all UK ISPs to block the IWF list of websites containing child abuse images; the development of good practice guidance for providers of social networking sites (expected to be published soon); and work with Ofcom and the British Standards Institution to develop a Kitemark™ for parental control software.

3.105 HSTF is not the only initiative looking at issues related to child internet safety. Many of the same stakeholders who are members of the HSTF take part in the Cyberbullying Taskforce, which is chaired by a minister from the Department for Children, Schools and Families (DCSF) and promotes joint-working to tackle the problem of cyberbullying.

3.106 The Department for Culture, Media and Sport (DCMS) also has important policy responsibilities for online content, given its responsibilities for policy on media regulation and lead on media literacy. DCMS is responsible for the systems of broadcasting regulation and film classification, which provide significant safeguards for children and vulnerable people in the offline world and offer lessons for the online world. It has built on these responsibilities through: the development with industry of a system of self-regulation for video-on-demand and negotiation of the EU Audio-Visual Media Services Directive, which covers broadcast and online programme regulation; the promotion of media literacy, through giving Ofcom a specific responsibility and funding for media literacy work, agreeing their annual strategy and supporting the work of the Media Literacy Task Force; and through the establishment, in conjunction with the Department for Business, Enterprise and Regulatory Reform (BERR), of the Convergence Think Tank, which is examining the wider questions of content regulation in a converging media environment.

3.107 In addition, work by the Department for Business Enterprise and Regulatory Reform (BERR) touches on child internet safety. BERR has a role as the voice for business within government and as the Department responsible for Better Regulation: it maintains strong business relations with key companies and trade bodies and facilitates dialogue between industry and Government on a broad range of policy issues, including for example on internet content and child safety. BERR works to ensure that all Government Departments and agencies deliver better regulation for the private, public and third sectors. Also, BERR leads the UK's engagement with the European Commission's Safer Internet Plus Programme, which is largely concerned with promoting child online safety.

Strengths of current arrangements

3.108 In their responses to the Call for Evidence, several members of the HSTF highlighted the way in which the HSTF brings Government, industry, law enforcement and the third sector together as its key strength. As one respondent said: "The success of the current approach is the fact that all parties come to the table and discuss issues as equals, with mutual respect for each other's expertise." In an area where debate is often polarised, the HSTF brings different parties together to hear each other's perspectives. From my experiences in conducting this Review, I believe that an approach such as this, which takes account of the huge diversity of cultures that exists between different sectors and different countries, is a very significant achievement.

3.109 This arrangement for joint working, in which Government participates in discussion rather than issuing demands, was highly valued by a number of stakeholders. They pointed out the benefits of an approach which brings together stakeholders with different skills and areas of expertise, rather than relying on a single organisation to encompass every perspective. In pioneering this approach the UK has become a global example of good practice.

3.110 Participation in the HSTF is voluntary. Industry, including large companies that are based largely or wholly outside the UK, come together with Government and other stakeholders to identify

good practice. This approach is seen by many as a much more powerful way to influence industry practice than statutory rules which would only apply to UK based companies.

3.111 Another thing about the HSTF which stakeholders valued was the Ministerial leadership. Third sector participants are happy that industry is not 'left to its own devices', industry are reassured that Government is not seeking to push responsibility for the downsides of the internet solely onto industry and both see the need for mechanisms to influence Government and public sector practice.

Weaknesses of current arrangements

3.112 Although the range of efforts across Government may be positive in themselves, there is a feeling amongst industry and some other stakeholders that Government work on this issue is not sufficiently joined up. It is not always clear how different areas of Government policy on this issue fit together and many stakeholders expressed fatigue at having to work separately with a number of Government departments, each of which has a different level of understanding and set of priorities which sometimes overlap. As the internet has an impact on more and more areas of our lives, policy makers can find themselves under pressure to develop policy in their specific area with a limited understanding of the technology or the range of work taking place in other areas.

3.113 As a consequence of this lack of joined-up Government there is no strategic approach to child safety on the internet. The responsibilities of different Departments and agencies in this area are poorly articulated. Even in the HSTF, where a number of Departments and agencies are represented, there is a sense by many that: (a) the programmes of work are driven by the latest concern rather than a strategic plan; and (b) whilst Departments may send representatives to the taskforce from a specific policy area, this does not necessarily represent willingness for the Department to engage across its areas of responsibility. For example, although DCSF is represented on the taskforce, given its remit on child protection and bullying, several stakeholders have expressed frustration at the taskforce's inability to influence the practice of schools more generally.

3.114 The HSTF appears to lack mechanisms for developing a robust evidence base, including qualitative and quantitative research, to inform policy and for evaluating the effectiveness of existing HSTF work, such as its published guidance. This seems in part due to a lack of funding and secretariat staff.

3.115 Also, there is no mechanism for the voices of children and parents to directly inform the work of the taskforce. This issue was raised by several respondents to the Call for Evidence.

3.116 The main 'product' of the HSTF is good practice guidance documents, which are developed through consensus in multi stakeholder working groups. Many members of the taskforce valued the process by which these developed, but questions were raised about the time this takes (sometimes up to two years) and what happens to the guidance and the industry standards they embody after they are published.

3.117 However, although the documents are detailed and specific in what they require from industry, concerns have been raised over their transparency. The existence of the documents is not well publicised, they are too lengthy and technically complex for the

public to understand and, crucially, performance against these standards is not monitored, so the public has no way of knowing which companies are adopting good practice. This lack of transparency means that even if there was a major improvement in public awareness and understanding of internet safety issues, it would still be difficult for families to make informed choices about which online services to use.

3.118   A lack of transparent industry standards in one part of the internet value chain can make it difficult for other parts of the chain to provide transparency to the public. For example, some mobile phone networks told me that although they welcomed the development of HSTF guidance for social networking sites, they had had difficulty in determining which sites had implemented the guidance. This caused problems when deciding whether to place versions of the social networking services for mobiles behind access controls (which mobile providers operate under their self regulatory code) so that users aged under 18 cannot access them. As one network told us, "Our experience of negotiating with social networking providers has demonstrated a need for greater clarity from providers to enable us to protect and inform our customers."

Improving on current arrangements

3.119   Looking at the strengths and weaknesses of existing arrangements to improve child internet safety, I can see a number of strengths, particularly around the benefits of multi-stakeholder joint working. In considering how current arrangements can be built on and improved, we need to make sure that these benefits are not lost.

3.120   It seems clear that there is a need for a national strategy to address child internet safety which:

   a. more effectively influences practice across Government and the public sector;

   b. more effectively influences industry practice in a way which can be verified;

   c. provides greater transparency and gives children and parents a voice.

3.121   The grid below assesses different models for leading such a strategy against four criteria based on the considerations above.

Option	Preserves what is good about existing multi-stakeholder arrangements	Effectively influences practice across Government and the public sector	Effectively influences industry practice	Increases transparency and gives children and parents a voice
1. Do nothing	The current arrangements are good at getting a range of stakeholders round the table to discuss the issues. But there is frustration from some about the number of dialogues taking place with Government and the lack of a single recognised lead for child internet safety.	HSTF is well placed to influence law enforcement. But Government action is fragmented and not all Departments have sufficient buy-in to HSTF.	HSTF has wide scale buy-in even from non-UK companies. But it is difficult to assess effectiveness given lack of monitoring of performance against standards. Industry struggling to respond to unstrategic Government demands.	Publication of good practice guidance does not translate into transparency for the public. Many voices speaking on behalf of children and parents, but no direct voice.

Option	Preserves what is good about existing multi-stakeholder arrangements	Effectively influences practice across Government and the public sector	Effectively influences industry practice	Increases transparency and gives children and parents a voice
2. Government attempts to regulate industry	There is a serious risk that the beneficial joint working arrangements would be lost, with industry retreating to a defensive stance.	Effectiveness would depend on ability of Government to develop strategy. May be more difficult to develop synergy with public sector activity, given damage to joint working.	Government may struggle to frame effective legislation given fast-changing technology. May become over prescriptive and may stifle innovation. Unlikely that non-UK companies would change practice to comply with UK statutory framework.	Legal requirements would be transparent. Mechanisms could be developed to give parents and children a voice. But it may be harder for them to engage in a legalistic debate about regulation than a practical debate about industry standards.
3. Government asks industry to develop a self-regulatory body	There is a serious risk that the beneficial joint working arrangements would be lost, with Government retreating to a place from which it issues demands rather than engaging in constructive dialogue. Industry may perceive loss of Ministerial involvement as an attempt to push responsibility onto industry.	Effectiveness would depend on how far self-regulation met the concerns of Government and others. Industry-led body is likely to struggle to effectively influence Government Departments or public bodies such as schools or the police.	Voluntary nature of self regulation creates a potential for non-UK companies to buy-in. But this buy-in may be damaged if Government demands become too prescriptive and financial burden on industry becomes too great.	Self-regulatory codes of practice would be more transparent than good practice guidelines, provided that the body was effective in monitoring them and publishing the results. Mechanisms could be developed to give parents and children a voice.
4. Government establishes a new agency to deal with child internet safety	Although the agency could convene collaborative working it may struggle to provide the central point for a strategy that involves industry and Government. Companies may prefer to lobby Government directly. The set up process may distract attention and resources from addressing immediate areas of concern.	A separate agency may have some difficulty in influencing Government Departments or other parts of the public sector which are focused on their own priorities.	Industry may be unwilling to engage with an agency over which they have no influence and which may also have limited influence over Government policy.	Agency would be well placed to offer an independent, transparent monitoring of industry practice. Mechanisms could be developed to give parents and children a voice.
5. Government transfers overall responsibility for online child safety to an existing agency like Ofcom	An existing agency may struggle to incorporate the unique joint-working approach of the taskforce within its current structures.	No existing agency has a remit which sits clearly enough across all the issues covered by the strategy to effectively influence Government Departments.	An existing agency such as Ofcom may find it difficult to influence industry on this whilst continuing to work with them on other issues where it applies a different regulatory or enforcement approach.	Agency would be well placed to offer an independent, transparent monitoring of industry practice. For example, Ofcom have been involved in the review of the IMCB code. Mechanisms could be developed to give parents and children a voice. For example, Ofcom utilise a range of audience research techniques.

Option	Preserves what is good about existing multi-stakeholder arrangements	Effectively influences practice across Government and the public sector	Effectively influences industry practice	Increases transparency and gives children and parents a voice
6. Existing arrangement is developed into a multi-stakeholder council, supported by a central Government secretariat with overall responsibility for online child safety	This would preserve the benefits of the current arrangements, whilst alleviating some of the tensions caused by a lack of joined-up Government and perceived under resourcing.	With the right level of Ministerial buy-in and clearly defined roles for the Departments involved, this model could effectively lead a strategy across the whole of Government.	Industry is likely to respond well to a more joined-up conversation with Government.	The council would need to think carefully about who was best placed to monitor compliance with industry standards. Mechanisms could be developed to give parents and children a voice.

3.122 On balance, I believe that the most effective way to preserve the benefits of joint working, whilst providing the strategic leadership for transparent industry and Government practice is Option 6. This, broadly speaking, is a self-regulatory approach with industry and Government working in partnership. As such, **I recommend transforming the HSTF into a UK Council for Child Internet Safety, supported by a strengthened and properly resourced Government secretariat, with responsibility for leading a child internet safety strategy across Government. All Government work focused on child internet safety would take place under the auspices of this strategy.**

Framing the strategy

3.123 The national strategy for child internet safety would work towards our three objectives through two strands: a **better regulation strategy**, promoting transparent work by industry to provide families with the tools to use the internet safely; and an **information and education strategy**, focused on raising the knowledge, skills and understanding around e-safety of children, parents and other responsible adults. The strategy would align existing work to keep children safe online, showing clearly how work under each of the two strands contributed to the three objectives of reducing availability, restricting access and increasing resilience to harmful and inappropriate material online. In order to ensure that the Council makes good progress from the start, **I recommend that within six months of its establishment, the Council publish an outline strategy for child internet safety.**

3.124 The self regulatory approach I have outlined focuses on meeting the challenge of risks to children from material on the internet which is harmful or inappropriate, but not necessarily illegal – which has been the focus of this Review. However, the original focus of the HSTF was the development of a joined-up approach to tackling child protection issues such as online grooming and child abuse images. Where a breach of the law is concerned, a different approach, which includes enforcement measures will be appropriate.

3.125 Nevertheless, I do not recommend separating efforts to tackle child protection issues from the rest of the strategy for child internet safety. There is, and will continue to be, an inevitable overlap between work to address illegal activity and work to address online content, contact and conduct which is potentially harmful and inappropriate. Many of the core child protection messages communicated by organisations like CEOP are applicable to wider child online safety issues. For example, children need to learn not to give their phone number out online because it could be used by online predators, but also because it could

be used for cyberbullying or nuisance marketing calls – it would not make sense for two strategies to be responsible for delivering this simple message. The child internet safety strategy will need to clearly address the areas in which a common approach to illegal and non-illegal activity is appropriate and those where it is not.

> **Child Exploitation Online Protection Centre (CEOP)**
>
> The Child Exploitation and Online Protection Centre (CEOP) is the UK's dedicated response to tackling the sexual abuse and exploitation of children. It is part of the UK policing community and as such applies the full powers of the law in tracking and bringing to account offenders either within the UK or overseas. It applies a combination of the latest policing techniques with the power of technology to identify, locate and safeguard the victims of abuse.
>
> But the CEOP Centre is very different in its make up to traditional police forces, delivering as it does an holistic approach that combines police officers with specialists from children's charities, industry, government and the wider child protection community with initiatives that look to empower children – through its ThinkUKnow programme, work with industry to advise on safer by design strategies and specialist units to better understand how to combat the sexual abuse and exploitation of children. Find out more at www.ceop.gov.uk

3.126 Sometimes questions have been raised over how, or if, the criminal law applies to particular types of harmful and inappropriate material, and thus, whether there is a role for law enforcement in the response. In areas such as websites promoting suicide, self-harm and eating disorders, cyberbullying, material depicting the commission of crimes (eg. so-called 'Happy Slapping' videos) there is some confusion about how offline laws and enforcement mechanisms can and should be applied to online activity. To assist the development of a coherent strategy, **I recommend that the Council investigates where the law around harmful and inappropriate material could be usefully clarified and explores appropriate, properly resourced enforcement responses.** I believe that CEOP should play a key role in leading the development of enforcement responses in this area, given its expertise and success in responding to child protection issues which involve new technologies and sometimes cross international boundaries.

A UK Council for Child Internet Safety

3.127 There are a number of issues to do with the nature of the Council which need to be pinned down.

Structure and leadership of the Council

3.128 The present structure of the HSTF seems to work well. The taskforce meets, chaired by a Minister, with a programme board to oversee the taskforce's work, sub-groups for different policy areas, chaired by an appropriate member of the taskforce, and multi-stakeholder working groups set up to develop particular pieces of guidance. **I recommend that this structure be transferred to the new Council.**

3.129 Currently the department with the greatest involvement in this issue is the Home Office. This is understandable, since the focus of Government activity on child internet safety has initially been on protecting children from abuse and prosecuting the perpetrators of abuse.

This is still a very real and important challenge, so it is right that the department responsible for law enforcement continues to have a leading role.

3.130   As I have said, the work of the HSTF has gradually expanded to cover issues of content that is harmful and inappropriate, but not illegal. This is an area of policy where law enforcement tools are less effective and the role of empowering families though education and information is increasingly important. The Council will need to influence this area of activity as well as law enforcement if it is to lead a successful strategy. A wide range of Government departments and agencies have a role to play here, but the Department with the greatest capacity to influence families and those working with children is DCSF.

3.131   **I recommend that the UK Council be chaired jointly by Ministers from Home Office and DCSF. In developing the Council they should put in place arrangements which reflect the crucial need for a joined-up Government approach to children and young peoples' safety online.** It will be important for the Council to secure the respect of all members by demonstrating an understanding of their various perspectives. DCMS has important policy responsibilities for the media and creative industries, and in balancing public protection through regulation with freedom of speech and should therefore have a key role in the Council.

3.132   A range of other departments will also have a role to play. BERR has general responsibility for the Government's relationship with business. The Department of Health has a shared responsibility with DCSF for the health and wellbeing of children and young people. The Ministry of Justice has responsibility for the criminal law. The Department for Innovation, Universities and Skills has an interest in the internet as a platform for innovation and responsibility for raising adult skills. The devolved administrations have responsibility for delivering children and families' policy in their nations.

3.133   At present, the secretariat support for the HSTF is provided by staff in the Home Office. However, the taskforce does not have a dedicated staff. Some members of the taskforce have called for a dedicated team of officials to concentrate on taking forward the work of the taskforce across Government. Certainly, in order for the new Council to effectively lead a child internet safety strategy, delivery of which is rigorously programme managed, **I recommend that the Council be supported by a dedicated secretariat staff.** I believe that in order to drive activity across Government, the most effective structure for this secretariat would be a joint unit reflecting the key interests of all relevant departments and the need to secure joined-up Government policy in this area.

3.134   Critical to the success of the Council will be its ability to engage major industry players, many of whom are based outside the UK. We need to send a signal to industry and the public that the UK is serious about its role as a world leader in child internet safety, making proper engagement with the Council an international benchmark of what it means to be a responsible member of the industry. Against the background of a HSTF which has sometimes struggled to secure the right kind of involvement from the right departments, there is also a need to make sure that the strategy has impact across Government, not just in Home Office and DCSF.

3.135   Industry respondents to my Call for Evidence told me that the publicly visible involvement of the Home Secretary in the HSTF was vital in ensuring buy-in from a range of stakeholders. To send the right symbolic message to the world, we need to take oversight

of the Council to the highest level. Therefore, whilst Home Office and DCSF Ministers will be responsible for the strategy, **I recommend that the UK Council for Child Internet Safety should be established and launched by the Prime Minister and that each year it reports its progress and agrees future direction at a Child Internet Safety Summit hosted by the Prime Minister.**

Child Internet Safety Strategy
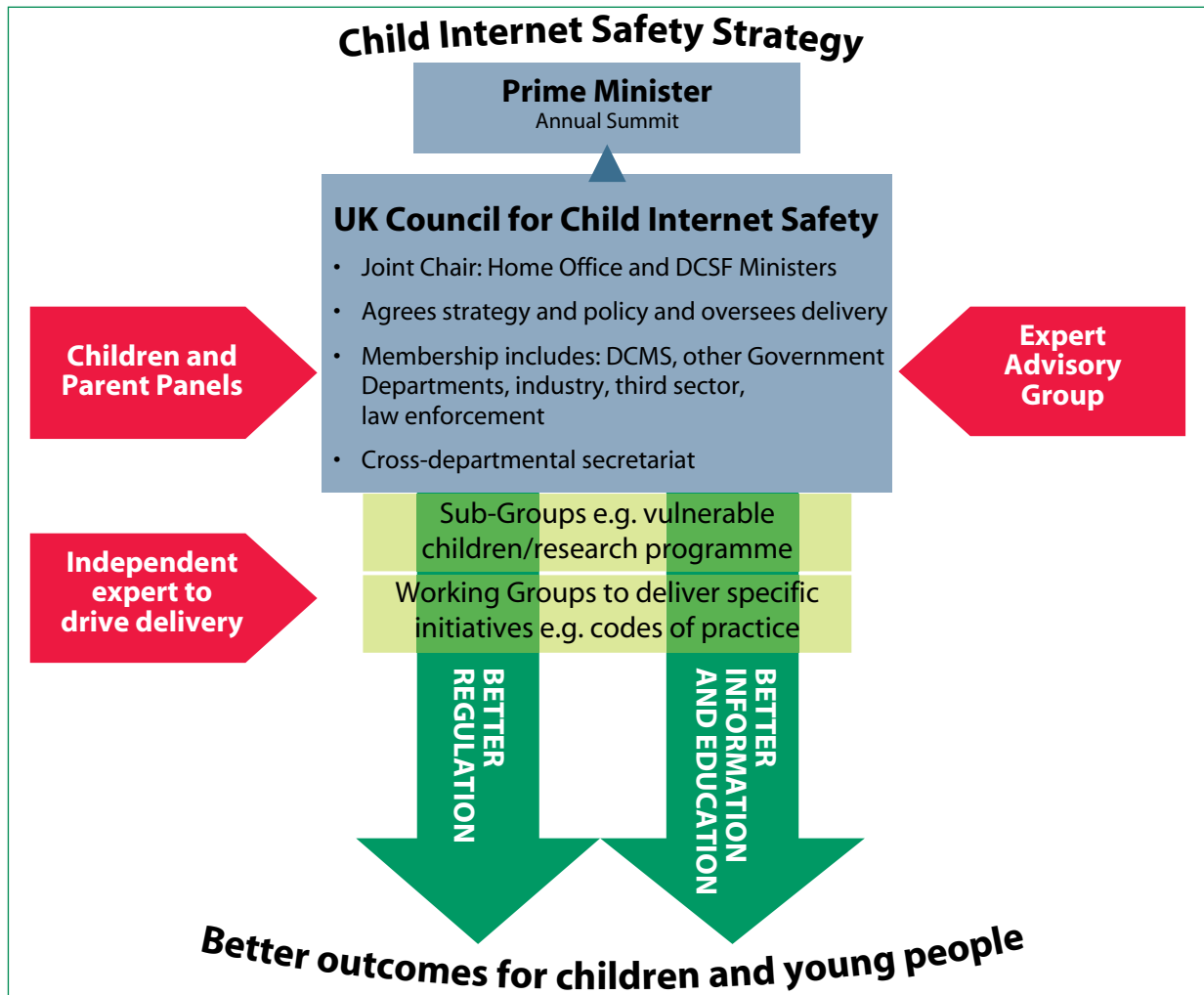
Building the capacity of the Council to make good policy

3.136 Although joint working increases all parties' understanding of each others priorities and perspectives, discussions in this area can sometimes become deadlocked over questions of what technology can or cannot do. There has been a strong message from stakeholders that we need to draw on expert advice. Joint working arrangements would be assisted by the appointment of an advisory board, made up of experts in technology, media, child development and the law with no current ties to companies represented on the Council. This board could advise Ministers, provide challenge to the working groups and, where necessary, facilitate informed discussions and drive delivery. This would encourage the Council to think beyond existing assumptions about what is possible and, by providing an expert interpretation of the evidence, would help make sure that work on child internet safety is driven by evidence rather than anxiety. **I recommend that Ministers appoint an expert advisory group to assist the work of the Council.**

3.137 A key weakness of existing work around child internet safety and a key barrier to the development of a strategic approach to the issue, is the lack of a satisfactory evidence base. In the fast-changing sphere of the internet research quickly goes out of date. Many respondents to the Call for Evidence and many of the academics engaged with the review called for the development of a rolling programme of research to continuously inform policy making. This research should be made publicly available and be conducted according to robust standards to ensure its credibility with all parties. It could draw from international models of good practice such as the Pew Internet and American Life Project. **I recommend that there be a Research Sub-Group of the Council to establish a rolling programme for research and to ensure that robust evidence informs the Council's work.** Mapping the existing research that is being undertaken by Government, public sector bodies such as CEOP, Ofcom and Becta, industry, academics and others in order to determine where additional research is needed, and how it can be funded will be a key early task for the Council. This is particularly important in order to develop baselines against which the effectiveness of the strategy can be assessed.

3.138 One of the key tasks for the research programme would be to provide continually updated evidence on the views and attitudes of parents and children. However, I strongly believe that children and parents should be active participants in shaping work on child internet safety. Suggestions on how to achieve this included the establishment of a parents' panel and a children and young people's panel. This is an approach which has worked well at CEOP, where their youth panel helps to develop effective education and communications materials for children and young people. **I recommend that the Council establish mechanisms to consult and listen to children, young people and parents.**

Providing transparency and influencing industry practice

3.139 As I have already said, the industry standards contained in HSTF good practice guidance may improve industry practice, but there is no clear way to monitor whether this improvement has actually taken place or to demonstrate to the public, which products or safety approaches comply with the agreed industry standards. It is only right that where companies wish to take credit for having signed up to industry standards, they also sign up to processes for their performance against those standards to be independently assessed.

3.140 Greater transparency would be achieved if these and any future guidelines were formalised into voluntary codes of practice, which set out the process for monitoring practice by the code's signatories; who is competent to decide when the code has been breeched; and, the consequences of breeching the codes. The incentive for signing up to one of these codes would be the opportunity for companies to promote themselves as responsible businesses with an interest in online child safety. It is likely that the main consequence of breaching the codes (eg. by refusing to comply with one of the requirements) would be public censure by the Council. Avoiding this kind of reputational damage would be a strong incentive for companies to co-operate.

3.141 A range of bodies such as Ofcom and the Broadband Stakeholder Group have experience of supporting the development of self-regulatory arrangements, and could work with industry to support the development of voluntary codes of practice. In this area, what I believe will be key is the presence of an independent person or persons, who have credibility with all stakeholders and a track record of delivery, and thus are well placed to facilitate the development of the codes and oversee their implementation by signatories.

This will be important to ensuring that strategy and policy discussions are translated into action in a timely fashion.

3.142 The internet is a complex place in which to develop standards. Online products and services are diverse, based on technology that is developing quickly, and so the same standards of safety can often be achieved by different means in different contexts. Because of this, a sophisticated approach to developing standards is needed. Nevertheless, it is likely that for each area on which a code is developed there will be a number of basic points that apply to a whole range of different types of service. These would form the minimum standards with which signatories agree to comply. For example, a code about moderation of user generated content sites might require sites to set out in clear language what kinds of behaviour by users are not acceptable on that site.

3.143 However, it would be against the interests of children if codes were so prescriptive that they stifled innovation and meant that companies based their safety measures on compliance with a lowest common dominator, rather than doing their best to make their products and services safer for children. So, in addition to generally applicable minimum standards, an effective code would include a set of safety principles on which companies could base their approach. For example, in a code for user generated content sites, the principle "safety information should be in prominent places to catch the attention of children and young people using the site" could be implemented in a number of ways depending on what the site looks like, how it is structured and how users can interact with it.

3.144 Voluntary codes of practice could draw on the good practice guidelines already developed by the HSTF, dividing the recommendations included in the guidance into specific requirements, which represent *minimum standards*, and *safety principles* which can be applied in different ways.

3.145 Codes could be effectively monitored by asking signatories to submit to an independent monitor on a regular basis, details of: (a) *whether* they had implemented the minimum standards; and (b) *how* they had implemented the safety principles. The independent monitor could then assess each company's implementation of the codes against their own self-assessments through targeted research. This approach would allow for a two tier assessment of a signatory's performance against the code. On the one hand, it would allow all responsible providers to buy-in to an industry standard which recognised them as such, by meeting the minimum standards. On the other hand, it would allow for the recognition of sites that are particularly child friendly by assessing performance against the safety principles. This process could also be used to identify and reward outstanding industry practice in the way in which Nominet's Best Practice Challenge currently does.

A model for voluntary codes of practice

VOLUNTARY CODE OF PRACTICE

Minimum standards:
All signatories must comply with these standards

Safety principles:
Signatories are assessed based on self-reporting of how their product/service meets these principles

3.146 An example of how this might work in practice is with social networking sites. All sites signing up to a code for social networking providers might be required to set the privacy settings of under 18 users to the highest level by default. They might also be required to sign-up to a principle that privacy settings should reduce risk of under 18 users being contacted by strangers. On Site X, user profiles cannot be viewed, except by people whom the user has invited to be on their friends/contact list, so it would receive a very high rating against this principle. On Site Y, users want to meet other people with similar interests, so the site allows users to alter the privacy settings, making parts of their profile public. It would receive a lower rating against this principle. However, it might go to great lengths to prompt under 18 users to think about what information they make available to who, and so receive a very high rating on the provision of safety information.

3.147 Robust monitoring by an independent body is vital if the public are to have confidence that signatories are meeting the industry standards to which they have signed-up. A range of different bodies could potentially be involved in monitoring the implementation and effectiveness of the standards. In particular, Ofcom has experience of independent monitoring roles, such as working with the mobile telecommunications industry to review their self-regulatory code for mobile content. It would be in a good position to:

- periodically assess implementation of the codes against companies' self-assessment of their own practices; and

- undertake consumer research to review the effectiveness of the codes in providing a safer experience and greater transparency for consumers.

3.148 I accept that there may be some areas where codes of practice are not appropriate. However, **I recommend that:**

- **wherever possible, the Council should ask industry to develop independently monitored voluntary codes of practice;**

- **the implementation of these codes should be independently monitored and their effectiveness should be independently reviewed; and**

- **the results of the independent monitoring processes should be properly publicised in a form that the public can understand.**

3.149 Government and Industry members of the Council would need to give careful consideration to the most appropriate method of funding the monitoring of voluntary codes of practice.

3.150 Voluntary codes of practice would need to specify a process for members of the public to complain where they think a signatory has breeched a code. Although one would hope that where companies have implemented a code there would be little cause for consumers to complain, this is important to provide transparency and redress for consumers who feel that a signatory to the code has not dealt adequately with an issue they have raised. **I recommend that members of the public should be able to complain if they think a code has been breeched.**

3.151 It is important to note that codes are not the only way of developing independently monitored industry standards. For example, in addition to producing good practice guidance, the HSTF has been responsible for commissioning the British Standards Institution (BSI) to develop a Kitemark™ for parental control software, which will be independently awarded and reviewed by the BSI. With sufficient publicity to raise awareness of the Kitemark™, this approach should also provide transparency to the public. This approach could be used in future as an alternative or a complement to a voluntary code of practice.

Empowering parents and children to manage access and build resilience

3.152 Securing industry's role in making children safer online through effective self-regulation is only one half of the story. The Council also needs to support parents, teachers and other adults in empowering children to stay safe online through its strategy for better information and education. To develop this strategy, key considerations for which are set out in Chapter 5, I suggest that the Council establish a sub-group on information and education.

Looking beyond UK child internet safety

3.153 Child Internet Safety in the UK is not a discrete issue. There is much that can be done across the sphere of the internet more generally and in terms of European and international co-operation on child online safety.

3.154 On the enforcement side, CEOP has played a leading role in the Virtual Global Taskforce, which enables law enforcement from around the world to coordinate intelligence and track offenders across borders. This has led to real advances in the protection of children in the UK and abroad. Building on their Youth Advisory Panel, CEOP is hosting the first ever International Youth Advisory Congress (IYAC) in July 2008. Up to 200 young people and children from all around the world will come together in London to discuss online safety and security with representatives from government, the police, child protection communities and industry.

3.155 In the UK, BERR is facilitating a dialogue between Government and industry in order to take a strategic view of what Government is asking industry to do around internet content issues. The Council will bring coherence to the area of child internet safety, but it will also have an important role in influencing wider policy around the internet.

3.156 At a European level, the *UK Code of Practice for the Self-regulation of New Forms of Content on Mobiles* has been an important influence on the development of a European Framework for safer mobile use. In establishing the UK as a world leader in child internet safety the Council could seek to promote the voluntary codes of practice which are developed on a European stage.

3.157 As an English-speaking country, where children frequently use online content and services originating in non-EU countries such as the USA, Canada and Australia, it is important that UK efforts to improve child safety influence the international agenda as well as the European. The UK Internet Governance Forum is a multi-stakeholder forum which develops UK input to the United Nations' Internet Governance Forum and it is likely that the Council would want to feed into this agenda.

3.158 **I recommend that the Council works to influence wider debates about UK internet policy and promotes the UK internationally as world leader in keeping children safe online.**

Timeframe for the strategy

3.159 Set out below is an indicative timeframe for the formulation, execution and review of this strategy.

By Spring 2009	UK Council for Child Internet Safety established by and reporting to the Prime Minister is in place with properly resourced secretariat.
	First Child Internet Safety Summit: Council publishes full strategy.
	Timeline established and underway for implementation of specific recommendations
Spring 2011	Review effectiveness of the UK Council in meeting its objectives and delivering the strategy.

'Netsmart'

Ensuring that children stay safe whilst browsing the internet is not an easy thing to accomplish and I believe the main reason for this is a simple lack of understanding and communication between parent and child. Parents will often install filtering systems, which block inappropriate material from view, and they will monitor internet traffic and websites visited by their children. Ground rules are often set out to stop the children from giving their personal details out online, accessing unsuitable content, becoming victims of online bullying, or downloading illegal material. The main problem with this is that children may not understand the reasoning for these rules, and will proceed to break them. It is important therefore that parents give thorough explanations as to why the rules are in place for the child's safety more than anything. Trust is important, and children should be encouraged to share what they do on the internet, but at the same time their privacy should be respected; being over protective is not a solution either. From a child's point of view, they should perhaps think about their own safety in the case of chat rooms, instant messaging and social networking sites, which are gaining in popularity. Also, the child needs to be educated about the law, ie. It is illegal to download pirate software, or copyright protected files, and legal action may be enforced. It is about children understanding why they need to keep themselves safe online, and protected against threats.

Paul Walmsley, 14

Over 13s competition winner

Chapter 4

The Internet: Specific Areas for Better Regulation

4.1 The structures outlined earlier should put the Council on a strong footing to work with all those involved in the internet landscape to empower children to enjoy the internet safely. The Council will set and adapt its priorities, on the basis of evidence and shared expertise to reflect changing technologies and social trends. However, the Council will not be starting with a blank canvass. In this section I set out my conclusions on a number of specific, current issues related to the internet and make recommendations about what the short and medium-term priorities for the Council should be in developing their better regulation strategy.

4.2 As I set out earlier, I advocate a consistent approach which maintains that:

- There is no 'silver bullet'. Neither Government nor industry can make the internet completely safe. The nature of the internet means that there will always be risks, and children and parents need to understand how to manage the risks of the internet.

- As such, policies that claim to make the internet completely safe are undesirable because they discourage children and parents from taking an informed approach to managing the risks. At worst they can be dangerous – lulling parents into a false sense of security and leaving children exposed to a greater level of risk than they would otherwise be.

- Industry and Government and others must work together to ensure not only that parents and children understand the risks, but that, as far as possible, the products and systems available support users to manage the risks.

4.3 My discussion of the issues is set out in terms of what might be done to reduce availability (i.e. reduce the availability of harmful and inappropriate content, the prevalence of harmful and inappropriate contact and the conduciveness of platforms to harmful and inappropriate conduct) and restrict access (i.e. equip children and their parents to effectively manage access to harmful and inappropriate content, avoid incidences of harmful and inappropriate contact and reduce harmful and inappropriate conduct) in line with the objectives I set out earlier.

Reducing availability

Moderation of user generated content

4.4   One of the most valuable features of the internet is the way in which it allows users to interact with each other online and upload their own content. This, of course, presents a risk that children might be exposed to harmful or inappropriate content or contact from other users, or that they might upload inappropriate material or make inappropriate contacts themselves. In order to address these risks, most sites which host content have 'acceptable use polices' against which they moderate themselves by taking down material and warning or banning users who misuse the site.

4.5   The Home Secretary's Taskforce on Child Protection on the Internet has published a number of good practice guidelines to support industry in their design and moderation of chat rooms and instant messaging (2003), interactive services for children (2005) and social networking sites (2008 – not yet published). They set out practical steps which companies can take to help users use their products safely and responsibly, for example, telling users about what kind of behaviour is acceptable on the site when they register, in language that is clear and easy to understand.

4.6   Moderating the large volume of activity on these sites can be challenging. For example, over ten hours of footage are uploaded onto the video sharing site YouTube every minute. It may not always be reasonable to expect sites to check everything that users upload before it appears on the site, as this would remove the immediacy of many online services – something which users, including children and young people, value greatly. However, strategies for addressing content and users that break a site's acceptable use policy vary in their effectiveness. Many sites' moderation processes rely entirely on users reporting abuse to the moderators – so called "notice and takedown" – but this can lead to an unmanageable volume of reports, meaning that abuse is sometimes dealt with slowly or not at all.

4.7   Many sites have developed methods to improve the effectiveness of their moderation practices. Some employ sophisticated software to automatically identify content which might be inappropriate by recognising keywords and phrases, behaviour patterns and flesh-tones and facial geometry in images. This content is then flagged for the attention of the site's moderators.

4.8   Other sites harness the social capital of their community of users to improve moderation. Reports from more than one user, from long-standing users or users who have been 'rated' highly by their peers can be flagged for attention with a higher priority, and such users can even be given moderation powers themselves, so that content they flag is removed until a moderator can look at it. This approach to moderation empowers children, young people and adults to be active participants in keeping themselves and others safe online, and making their web communities the kind of place they want to be.

4.9 The range of different approaches to moderation are set out in the table below:

	Description	Benefits	Drawbacks
Professional moderators	Staff employed or contracted by the service provider either: 'Pre-moderate' by viewing content as it is uploaded to a site and rejecting inappropriate content. 'Post moderate' by looking at material already on the site and taking action by removing inappropriate content and warning/ banning users who break the rules.	Can take a very subtle approach, understanding the nuances of what makes a particular kind of content or behaviour inappropriate and how to respond effectively. Pre-moderation can, in theory, prevent disallowed content from appearing at all.	Staff are expensive and require proper training in order to moderate effectively. Often impractical for staff to view everything that is uploaded, especially where large volumes of content are concerned.
Automatic scanning	A computer program scans content for words, phrases, properties of pictures and videos and/ or patterns of behaviour by users to identify inappropriate content or behaviour.	Can 'look at' huge volumes of content at once, saving time and money.	May lack nuance of a human moderator. For example, may flag-up harmless pictures of a swimmer because of the presence of bare flesh. Alternatively, may miss offensive comments where a usually inoffensive word is used in an offensive context.
Community moderation	Users report content and behaviour which they believe contravenes the site's terms of use.	Potentially, every user on the site can pay a role in enforcing the rules of their online community.	Users may not report inappropriate content before children have had a chance to see it. Some users may not wish to abide by the rules. Different users may interpret the rules inconsistently.
Reputation-based systems	This is a version of community moderation where the 'reputation' a user has built up on a site (eg. based on their level of activity, or rating they have been given by other users) gives particular weight to reports they make.	Genuinely empowers users, including children themselves, to become responsible, respected members of an online community with a role in keeping themselves and others safe.	May need to be supported by professional moderators to make sure that users with a high reputation do not adopt a vigilante approach which could lead to some users being bullied.

4.10 In reality, most sites use a combination of different approaches. Usually, at least some professional moderators are required to look at material that has been reported by users or flagged by scanning software. One of the key considerations is to make sure that these moderators are properly trained to take difficult decisions about how to handle content or behaviour on the site. For example, during 2008 CEOP is planning to roll out a training programme for online moderators, covering online risk-taking by children, how to identify criminal behaviour such as grooming from trends in usage and when and how to report concerns.

4.11 Techniques for moderating online spaces are evolving and improving all the time, and often the most effective approaches find new ways of combining different techniques – for example, with a site's moderation team supported by technical tools which draw on user reports, weighted by the user's reputation.

4.12 It is important that sites have the freedom to innovate and improve their moderation practices. However, whilst parents and children may wish to choose sites that have good moderation practices, the way that a given site is moderated is often too complex for most users to understand. <u>I recommend that the Council works with user generated content hosts to establish an independently monitored voluntary code of practice for the moderation of user generated content.</u> This could draw on the requirements and recommendations in the existing good practice guidance documents which have been produced by the HSTF. For example:

"Safety messages should include information designed for both parents/carers or other adults, and children. Consideration ought to be given to providing the messages for children in language which will be accessible to both younger and older age groups."

(Good Practice Model for Providers of Chat Services, 2003)

"Training [for professional moderators, where a site uses them] should cover: understanding when and how moderators are expected to intervene, and the activities that are prohibited to moderators, for example, unauthorised communication or meeting with service users, together with the reasons for such provisions".

(Good Practice Guidance for the Moderation of Interactive Services for Children, 2005)

"[There should be] advice available on all applications and interfaces within the service and links to the reporting abuse process."

(Good Practice Guidance for Providers of Social Networking and Other User Interactive Services, 2008 – unpublished draft)

4.13 <u>I also recommend that the education and information strategy specifically includes raising children and parent's awareness of their role in reporting abuse to the site's host (or relevant public authority) and their means of redress if they are not satisfied.</u>

Industry incentives and the law

4.14 In discussions with the Byron Review team, several industry stakeholders said they were sometimes hesitant about taking proactive steps to tackle the existence of harmful and inappropriate content online, or to publicise the steps that they were taking, for fears around liability. As the Internet Service Provider's Association (ISPA) put it: "…ISPA members who take steps to proactively moderate some or all of their content consciously assume the legal risk that they may be held liable for any illegal content that slips through their moderation processes."

4.15 Under Article 14 of the E-commerce Directive companies that 'host' internet content on behalf of others (eg. a user's profile page on a social networking site), cannot be held liable for anything illegal about this content until they have "actual knowledge" of it. So where a content host is told that something they are hosting is illegal, they cannot be prosecuted in the criminal courts or sued in the civil courts, provided that they act "expeditiously" to remove the content or block access to it. This concept is sometimes called 'notice and take-down'.

4.16 Some companies interviewed by the Byron Review expressed concern that efforts to automatically scan the content hosted on their site could be interpreted by a court as

meaning that they have actual knowledge of all the content they host, meaning that they would lose their protection from liability under the E-Commerce Directive. In particular, it has been suggested that some companies might not (publicly) scan for harmful and inappropriate content because of fears around being sued or prosecuted for hosting material that is defamatory or breaches copyrights.

4.17 Advice given to the Byron Review by the Department for Business, Enterprise and Regulatory Reform's (BERR) legal advisers confirms that the meaning of "actual knowledge" cannot be stated definitively – that would be for the court to decide. However, it has been suggested that "actual knowledge" means that a company was aware of the content, not merely that they should have been aware of it. Another consideration is that if a company were to become aware of a particular piece of illegal content, they would lose their protection under the E-commerce Directive in relation to that content, but not in relation to all the content on the site.

4.18 It seems that where companies take steps to scan the content they host, there is a risk that they will become liable with respect to illegal content which they become aware of but fail to remove. However, calculating risks around liability is something businesses do all the time. It seems fair for companies to balance the benefits of making their sites safer for children, and the added value this brings to their brand, against the risk of liability on those occasions where their systems do not operate perfectly. Arguing otherwise is a bit like saying that it is unfair to ask companies to survey their premises for asbestos in case they find some but fail to remove it safely. Child safety is everyone's responsibility and I believe that on this issue companies should not hide behind the law.

4.19 There have been suggestions that companies could minimise the risk of liability by engaging a third party to monitor the content on their site and explicitly inform them about content which breaches their site's acceptable use policies. **I recommend that the Council explores the possibility of developing such arrangements to minimise the risks of liability for companies that take steps to make their products safer for children.**

4.20 Some companies told the Byron Review team that whilst they respond to breaches of their acceptable use policies as quickly as possible, they are reluctant to make specific public commitments about the time it takes to do this. This is because of a concern that these commitments could become part of a company's contract with its users, leaving the company open to litigation for the rare instances where it failed to meet the target due to, for example, an unusually high number of complaints. The counter argument to this point of view has been made by companies like Facebook, which has made an independently monitored commitment to respond to user complaints about nudity, pornography, harassment or unwelcome contact within 24 hours. Companies like Facebook argue that the risk of liability is outweighed by the benefit of being able to make a clear statement to their users about the service they can expect.

4.21 It may well be that because of the nature of the services they provide some companies are reluctant to make firm commitments about take down times. Nevertheless, where they have been made, such commitments provide greater transparency for users about the standard of service they can expect from a site. The inability of some companies to make such commitments should not prevent the development of clear standards which enable

users to make more informed choices about child online safety. **I recommend that sites are encouraged to sign up to specific public commitments on take down times.**

Is there a role for advertising in incentivising responsible content hosting?

4.22   Online advertising is the fastest growing part of the advertising industry; it is worth £2.5bn and although it currently accounts for just 15% of the total spending on advertising across all media, it has already grown to surpass cinema, radio and outdoor advertising, and is soon set to compete with other media (Ofcom, 2008). As a result of this expansion commercial websites increasingly find that they can make more money from advertising revenue than from charging a subscription fee to audiences wanting to view their content. As these websites become ever more reliant on advertising, advertisers have the potential to play an important role in driving up standards in responsible content hosting by determining what types of content they are willing to appear next to.

4.23   However, the ability of an advertiser to vet the content next to which it appears can be difficult when placing adverts on the 'long tail' of internet content (see paragraph 3.100); and there have been several high profile cases where adverts for respectable well known brands have appeared online next to inappropriate or offensive content. This difficulty arises when placing 'blind' ads, where an advertising network will sell web space across its inventory and may not tell an advertiser where its advert has been placed.

4.24   Advertising next to offensive or inappropriate content is important, as it not only helps fund the hosting of such content, but the appearance of well known and respectable brands may also legitimise the content of those sites in the eyes of a child (see paragraph 3.43). Children and young people are unlikely to understand the complexities of online advertising, and are therefore more likely to trust and believe a website's contents because it has got valued brands wrapped around it.

4.25   Responses to my Call for Evidence demonstrated that there are already incentives and systems in place to manage the potential for this to happen. As one respondent explained:

"Advertisers do not want their advertisements to appear on websites where there is inappropriate or offensive content which will diminish the advertiser's reputation and goodwill".

(Institute of Advertising Practitioners, response to the Call for Evidence)

4.26   On the back of the concerns regarding brand image, the internet advertising industry has developed the Internet Advertising Sale Houses (IASH) Code of Conduct, compliance with which helps to reduce the availability of undesirable content.

4.27   Members of IASH are required to vet and categorise their inventory of websites, so that publishers are able to dictate the type of content next to which they wish to appear. The IASH Code has a list of 'barred content' such as 'hate', 'obscene' or indecent content, on which members are forbidden to offer advertising space; and advertisers are also able to abstain from advertising on sites that might host inappropriate user generated content such as blogs, personal home pages, peer to peer, and uncontrolled forums. In addition, an auditing and sanctions mechanism is in place to ensure that members abide by their contracts with the advertisers.

4.28 Around 36% of all internet display advertising is distributed via ad networks, and with membership of IASH increasing in size, it is possible for advertisers to act as a lever for increasing standards in website content by reducing the funding and thus availability of potentially inappropriate content. In this context, I welcome the work of IASH, and I suggest that when using 'blind advertising', advertisers place adverts through an advertising network which is an accredited IASH member.

4.29 There are constraints on what this can achieve since a number of websites on the 'long tail' will always be run by enthusiasts who are less reliant on advertising to fund their activity. Indeed, many of the sites that host potentially harmful or inappropriate content are not run in a professional capacity.

Specific issues for vulnerable groups

4.30 There is a range of material on the internet that may present particular issues for specific groups of children and young people. This includes content or sites that promote or give information about harmful behaviours such as suicide, self harm and eating disorders like anorexia and bulimia. Research conducted for the Byron Review shows that there is concern about such sites. 13% of parents and 6% of children said they were concerned about internet content setting out how to commit suicide, whilst 9% of parents and 3% of children said they were concerned about pro-anorexia content (Ofcom, 2008).

4.31 The messages from the literature are complex. Whilst some children might be deterred from harmful behaviours by witnessing such content, or might find emotional and social support from others experiencing the same feelings, it is clear that for some children there are risks. Sites providing information about suicide techniques, for example, could increase the chance of a suicide attempt being successful and therefore decrease the chance that a young person will receive help. And where online discussions or communities emerge around harmful behaviours, there is a risk of what Samaritans describe as an "echo chamber", where users reinforce each others' behaviour and negative feelings about themselves.

4.32 There has been considerable debate, especially in recent months, about how best to deal with such sites. In particular, questions have been raised about how the criminal law should be applied where people are using the internet to encourage others to commit suicide. A Law Commission report in July 2006 reiterated that assisting or attempting to assist someone to commit suicide is a crime, even when it happens online. However, there seems to be a lack of clarity about what this means in relation to how individuals use online services. Some groups have argued that the law is not effectively enforced in relation to websites and their users. **I recommend that:**

- **the Council's work to clarify the law around internet material and explore appropriate enforcement responses, include consideration of this type of content, and that this feeds into wider discussions about the law in this area;**

- **sites which exist to promote suicide in a way that contravenes UK law should be taken down once the relevant internet service providers have been notified of their existence and the fact that they are illegal has been confirmed.**

4.33   Where online material about harmful behaviours is not illegal, there has been some discussion about whether efforts should be made to reduce its availability. Whilst I understand that material of this type may be offensive or even distressing to many people, there are a number of strong arguments as to why it may not always be best for web hosts to take down material about harmful behaviours.

4.34   Harmful behaviours are discussed online in a range of different ways, some of which may be more negative for young people to be involved in. However, they may provide an outlet for young people who feel they have no other way to express their feelings. Allowing these discussions to take place in mainstream areas of the internet, where there are responsible content hosts, means that steps can be taken to put them in context. For example, where a site has human moderators, they can be trained to moderate such discussions sensitively. Similarly, where content discussing harmful behaviours is hosted on a website or listed by a search engine, software that recognises words and phases can be used to make sure that there are advertising links to support services.

4.35   Banning such content risks driving vulnerable young people away to more obscure sites, where efforts to provide context might not be present. In fact, it has been argued that banning such content from mainstream sites might draw attention to harmful behaviours in a way that makes them seem more attractive. Conversely, some have raised concerns that public moves to restrict the discussion of harmful behaviours online may add to the stigma attached to suicide and mental health issues, which prevents people from seeking help.

4.36   It is also important to remember that if troubled young people are able to discuss their feelings online, it allows us as a society to recognise these issues exist and, as best we can, inform our approach to dealing with them in the offline world.

4.37   The issues around material that promotes harmful behaviours are complex. They change as the technology develops. We need to make sure that our response reflects the complexity of these issues, bringing industry and Government together with those that work to support vulnerable or troubled young people to manage online risks. Whilst there is a good deal of work already being done, there may be scope for improvement. For example, one response to my Call for Evidence claims that searching for words explicitly related to suicide does not always lead to information about support services being displayed.

4.38   **I recommend that:**

- **the Council establish a sub-group on protecting vulnerable children and young people to ensure that the rest of the Council's work takes account of the needs of vulnerable groups;**

- **content hosts and search providers work with the relevant charities to make sure that advertisements with links to support services are displayed whenever users discuss or search for information about harmful behaviours;**

- **content hosts work with the relevant charities to improve moderation practices around discussions about harmful behaviours;**

- **the education and information strategy includes targeted communications to raise awareness of internet content issues amongst those who work vulnerable children and young people.**

Harmful or inappropriate advertising content

4.39 Although the issues surrounding a child's interaction with the commercial world online were not specified in my Terms of Reference, several respondents to my Call for Evidence considered online advertising to be both a form of inappropriate content (for example exposure to inappropriate text, image, products or services such as an advert for a dating service, or an advert for a film which uses violent imagery), and inappropriate contact or conduct (for example advertising competitions asking the audience to enter their personal details).

4.40 As discussed in Chapter 3, the risks associated with the process of commercialisation are relevant to a child's development and their wellbeing. In particular, the ability to critically evaluate commercial material correlates to the development of the frontal lobes, and therefore it is important that children are not exposed to commercial messages that they do not understand. Respondents to my Call for Evidence raised concerns about the sheer volume and format of adverts presented to children when surfing the internet. These issues are being considered by the Government through the Commercialisation assessment, which was announced in the Children's Plan. I welcome this important discussion. The following recommendations are intended as a contribution to that debate.

> **Assessing the impact of the commercial world on children's wellbeing**
>
> In December 2007 the Government announced in the Children's Plan that it will assess the impact of advertising, marketing and other commercial activity on children and their childhood. Leading academics will examine all the available evidence about changes in the commercial environment (and in particular whether there is any evidence that developments impact on children's wellbeing) with the aim of building a new consensus on the nature and extent of the impact of commercialisation in the round. Their assessment will also look at the benefits children gain from commercial engagement (including the economic contribution of industries and sectors that provide products to young people).
>
> The assessment will take approximately a year to complete and the process will consist of calls for evidence, consultations and the commissioning of new research.

Existing Arrangements

4.41 There are several mechanisms in place to make sure that where children are likely to be exposed to adverts, both the content and the product advertised are suitable for the audience.

4.42 The advertising industry – which produces advertising campaigns and acquires the advertising space – has been proactive in putting a self-regulatory system with codes of practice in place to minimise the exposure of children to inappropriate products and advert content online:

- Standards in online advertising are set by the Committee of Advertising Practice (CAP) Code, which covers issues relating to harm, offence, taste and decency and social responsibility. It stipulates that adverts marketed at children should not *contain* anything that is likely to result in their physical, mental or moral harm, or that will exploit their credulity, loyalty, vulnerability or lack of experience.[1] The codes also contain rules to ensure that certain inappropriate and age restricted products are not *targeted* to children.

- The CAP Code is administered by the Advertising Standards Authority (ASA) which investigates complaints about advertising content. It only takes one complaint to initiate an investigation; and if the ASA upholds a complaint, the advertiser is required to amend, withdraw or re-schedule the advertisement appropriately. The ASA is also able to place further pressure on those who refuse to comply with an adjudication.

4.43   In addition to the steps taken by the advertising industry, many of the publishers and media owners from whom the advertising space is bought have their own guidelines or codes in place:

- When approached by an advertiser, companies' own guidelines ensure that the ad is placed appropriately in the context of the product, ad content and target audience. Where possible, technological tools are used to ensure that adverts that are not suitable for a young audience, are placed in areas of the website where some form of age verification has taken place – for example on the sign out page of an 18 year-old's webmail account.

- Most recently, the HSTF has brought media owners together to agree to follow relevant local guidelines or codes for advertising to minors on social networking sites. In the case of sites that are based in the UK, this means compliance with the CAP code outlined above.

Are the existing arrangements sufficient?

4.44   Despite the measures outlined above, complaints made to the ASA about adverts on the internet continue to rise. Between 2005 and 2006 complaints rose by 32.7%, from 1557 to 2066, making the internet the third most complained about medium behind TV and the national press. Complaints regarding online adverts refer mostly to misleading rather than offensive or harmful advert content, and their rise could be explained in part by the rate at which the internet advertising sector is growing. However in discussions with the Byron Review, media owners raised concerns about the lack of understanding from advertisers of their obligations under the CAP Code. Media owners reported occasionally having to act as a safety net to prevent the viewing of an inappropriate advert by children. For example an advertiser might not understand online viewing figures and want to place an advert for an age-rated product in a part of the site that is likely to be viewed by children. It is not implausible therefore that complaints relating to harmful or offensive material could be higher if media owners were unwilling to help advertisers meet their obligations.

4.45   This problem has already been recognised by the Internet Advertising Bureau and CAP, who are both now looking at ways to raise awareness and help 'traditional' advertisers understand how they are able to meet their CAP Code obligations online. With this in mind,

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1 CAP 47.2 and 47.3

I recommend that the advertising industry works with media owners to raise awareness amongst advertisers of their obligations under the CAP Code to advertise responsibly to those under 18 on the internet.

4.46   In addition, I suggest that the UK Council on Child Internet Safety should take account of this issue in their strategy and keep it under review. This could be achieved for example, by inviting relevant stakeholders across the value chain to present developments in the initiatives that have been taken to raise awareness.

4.47   Examples of inappropriate advertising that stakeholders were particularly concerned about were adverts that contained sexual or violent themes or products:

"For my sons I worry about inappropriate material. The internet is a pornographer's playground and sexualised imagery is heavily pushed at and marketed at boys and young men"

(Parent)

4.48   Several respondents to my Call for Evidence were also concerned about exposure to new forms of adverts that are not covered by the CAP Code and therefore are not within the remit of the ASA. One area which raised particular concerns was the marketing of unhealthy foods, where several stakeholders felt companies were taking advantage of children's vulnerability through attractive child-friendly techniques that children were unlikely to understand as commercial material.

"The Government's focus on the introduction of restrictions on the promotion of HFSS foods on television and radio has not been matched by the introduction of appropriately robust restrictions across non-broadcast media, particularly the internet. The food industry remains relatively free to promote products and brands to children through an increasingly comprehensive array of techniques. These include online games, company websites, free downloads and social networking sites."

(Which?, response to the Call for Evidence)

4.49   In a wider context, the ASA was unable to investigate 90% of the 2066 complaints it received relating to online advertising in 2006 as they were outside its remit. It is yet to be seen from the 2007 figures if the issue has continued to grow. In reference to the marketing of video games discussed below, the content of video game product websites and free downloads such as screensavers are not subject to the self-regulation standards which apply to paid-for advertising.

4.50   In response to these concerns, the advertising industry is taking steps to ensure that the principles and standards enshrined in the CAP code are extended to account for these advances in the methods of advertising. One initiative is the establishment of the Digital Media Group (DMG) – an industry-initiated taskforce reviewing the current self-regulatory system for digital advertising. In addition to the work of the DMG, CAP is currently reviewing the UK Advertising Codes in their entirety to ensure they are relevant and fit for purpose. The proposed Codes will be subject to a 12 week public consultation, beginning in the fourth quarter of 2008.

> **The Digital Media Group**
>
> The DMG will advise on and recommend a practical, fair and robust system for self regulation of advertising on digital media to the Advertising Industry. The proposals will cover the likely remit, funding and method of enforcement of such a system, and will consider all communications that appear online. Part of this process will be to consider the existing self-regulation system and to propose a system that can progressively develop as the media develop. The DMG hopes to have finalised its proposals by September 2008 and to be able to report shortly thereafter in line with timings of the revision of the CAP Code.

4.51   In light of these developments, **I recommend that the advertising industry should continue to drive forward activity already underway to 'futureproof' the current regulatory system, especially in relation to digital advertising.**

4.52   **In particular I recommend that consideration is given to how promotional marketing in non-paid for online space can be brought within the regulatory framework for advertising, in line with principles on the prevention of harmful and offensive advertising to children outlined in the CAP code.**

4.53   **I recommend that this industry-led work should aim to be completed in parallel with the Government's assessment of the impact of the commercial world on children's wellbeing, so that by Spring 2009 Government can take stock of the evidence and progress and encourage any further action.**

Restricting access

Network level blocking

4.54   Some material on the internet, such as child abuse images, material inciting racial hatred and extreme pornography is clearly illegal in the UK. For such material, there is a strong case for it to be blocked by ISPs at a 'network level' using the Internet Watch Foundation's list, so that when a user tries to access a website they are blocked from doing so. Countries like China and Saudi Arabia have a much wider list of content which is illegal, and use similar techniques to prevent their citizens (including adults) from accessing it.

4.55   In the UK, at least one ISP offers users the option of connection to the internet which blocks material that is unsuitable for children to access. Some people have suggested that this approach should be extended to all ISPs in the UK. Users aged 18 and over would have to opt out of such a system in order to receive un-filtered access to the internet from their ISP. Proponents of extending network level blocking point to the fact that it does not rely on families to set up their own filtering software, and that, unlike filtering software on the user's computer, it cannot be disabled by technologically advanced children. However, there are a number of problems with a policy of blocking non-illegal material at a network level.

4.56 Firstly, there is the problem of deciding what material should be blocked. There is a general social consensus, reflected in our approach to film and television content, that explicit pornography and violent material such as videos of executions is not suitable for children. However, there is no such consensus about material such as non-pornographic nudity, violence or death in an educational context (such as information about wars or the holocaust) and the websites of extremist political parties. Similarly, many parents would wish to stop young children from stumbling across such material, but would be keen for their children to see such material when they are older teenagers or when it can be put in an appropriate context.

4.57 The decision about what constitutes "inappropriate content" can be highly subjective. What one person views as harmful, another might find offensive, whilst yet another might see it as an important, empowering learning experience for their child; and this view is likely to change depending on the age of the child. An example of this might be a sex education website. In consequence, any attempt to block content which falls into these grey areas would leave some parents unhappy that the system was either too restrictive or not restrictive enough (especially where there is more than one child in the house). There is also the possibility that someone whose content had been blocked as being unsuitable for under 18s might bring a successful legal challenge under Article 10 of the European Convention on Human Rights (right to freedom of expression).

4.58 Secondly, the task of blocking material at a network level presents a range of technical issues. The construction of a comprehensive list of harmful and inappropriate material (even if a satisfactory definition could be agreed), would be extremely difficult and expensive. Alternatively, the use of a program to automatically filter content based on words, phrases and the properties of images is likely to prove difficult. The extra equipment required by ISPs to operate such a system can be costly, and the process may have the side effect of slowing down internet access for users. For example, an Australian Government feasibility study of a network level filtering trial in Tasmania (NetAlert, 2006) found that the use of filters significantly reduced network performance, although only one in six users noticed this. Problems may also arise around words which can be used in several different contexts (e.g. the word "breasts" might denote a pornographic website, but it might appear on a site about breast cancer support or recipes for chicken breasts). Although this problem applies to all types of content filter it is particularly problematic at a network level, where users cannot override the filter for sites they know to be acceptable or set a different level of filtering for different members of the family, as they can with many PC-based filters.

4.59 Thirdly, there are problems with the way that network level blocking can appear to be an easy way of protecting children from all harmful and inappropriate material online. Even if it were possible to put a block on all content that is "unsuitable for under 18s", the presence of a content filter would do nothing to prevent harmful or inappropriate contact of the child or conduct by the child online. Also, it is wrong to assume that tech-savvy children determined to access blocked material could not 'get round' the system. There are a number of techniques such as using 'proxy websites' and certain kinds of encryption software, which make any network level filter – including those used by the Chinese and Saudi governments – possible to evade. As such there is a risk that purporting to give parents a 'safe' internet connection could lull them into a false sense of security, preventing them from developing effective parenting strategies to empower their children – especially older children – to use the internet safely.

4.60 For these reasons I do not recommend that the UK pursue a policy of blocking non-illegal material at a network level at present. However, this may need to be reviewed if the other measures recommended in this report fail to have an impact on the number and frequency of children coming across harmful or inappropriate content online.

Parental control software

4.61 There is a very wide range of parental control software available to enable parents to manage their children's access themselves. Although new products are being developed all the time, broadly, parental controls fall under the following categories:

	Description	Benefits	Drawbacks
White Lists	Parents specify a number of sites which children can access.	Very safe. Children can explore a 'walled garden' of age-appropriate material.	Not really free access to the internet so only appropriate for young children who only need to access a very limited range of sites.
Content filters	Parents specify types of content (eg. sex, violence, swearing). The filter prevents users from accessing such sites	Should block most inappropriate material, allowing children to surf freely without encountering inappropriate content.	Can over-block benign material making them less useful. Parents can usually add specific sites to a white list so that children can access them, but this can be time consuming. Likely to be too restrictive for teenagers and adults.
Usage monitoring	Parents can monitor records of their child's usage (eg. sites visited, downloads, webcam usage, contacts added, instant messenger conversations).	Allows parents to understand children's internet activity and to set and enforce rules.	Parents may feel that this is too intrusive for older teenagers.
Contact management	Children have to seek parental approval before adding contacts (eg. on email, social networking sites and instant messaging).	Can prevent children from making/accepting inappropriate contacts online.	Can be time consuming for parents and seen as too intrusive for older children.
Time/program limits	These allow parents to block children's access to certain programs or set limits on the length of time they can use certain programs or the computer.	Allow parents to restrict access even when they are not present.	May be too crude and restrictive for teenagers.

4.62 Many parental control programs allow parents to set different controls for each member of the family. Each member of the family logs in to the computer or the internet using a personal username and password. This allows parents to, for example, relax the degree of control as each child matures.

4.63 Parental control software is widely available, often for free – as a download, as part of another program (such as an internet security program) or even integrated into a computer's operating system. According to Ofcom (2008): "the leading consumer ISPs, which account for over 90% of UK internet subscriptions, all offer filtering products as part of their internet access proposition; and the majority of UK broadband subscriptions come with free filtering solutions."

4.64 However, research suggests that uptake of this kind of product is far from universal. 54% of parents of 8-17 year olds say they use filtering software on their home computer (Ofcom, 2008). In the same survey, 9% of parents said that they were not aware of this kind of software but would be interested in using it in the future. One major computer retailer told the Review Team that although they offer parents buying a new computer a free tutorial on how to set up the parental control software, relatively few parents choose to take this up.

4.65 Also, it seems that many of the parents that do use software are unsure about how to set it up effectively. 15% of parents of 8-17 year olds say their children can bypass the controls, and 33% of children agreed (Ofcom, 2008). According to focus group research conducted for the Byron Review, a few parents thought that new computers already came with parental controls set up. Others were aware that they did have access to parental controls but had thought it too complicated to set up, or their children had set it up for them.

"Make it easier to set up parental controls, I had to do it for my parents to control what my brother sees."

(16 year-old girl, Cardiff)

4.66 Much of the debate round internet safety has centred on content filters. Since take-up of this software is low some people have suggested that it should be compulsory for computers sold in the UK to include filtering software and for that software to be 'switched on' by default.

4.67 The internet is vast. Whilst we can, and should, seek to make the most popular sites safe for everyone to access, there will always be a 'long-tail' of sites which the UK Government cannot effectively influence because they are outside its jurisdiction. As such, effective filters can play an important role in protecting children from inappropriate and harmful content that is not hosted by reputable sites. But as we have seen, filters on their own are only one kind of parental control, which will only be appropriate for some age groups of children. Other kinds of parental control, which can be set appropriately for each member of the family (i.e. not just "switched on" or "switched off") may be more effective. We know, for example, that children in their early teens are naturally predisposed to take risks, and that risk-taking is an important part of their development (see Chapter 2). Each child is different and different children will be at different stages of development at different ages, depending on their individual characteristics. In the end, parents need to select an approach which best suits their child. For example, parental control software that does not restrict children's access to the internet, but allows parents to monitor their online activity may become more suitable than filters as children get older.

4.68 It is also important for us to remember that parental controls, including filters, are only effective where parents understand how to use them. My focus group research found that some parents had set up parental controls, but found them too difficult to manage because they blocked too many sites that their children wanted to see or just slowed everything down too much. It is possible that if a filter was switched at a high level by default, these parents would be likely to switch if off, rather than learning how to tailor it to their family's needs.

4.69 Equally, parents need to be aware that content filters do not protect children from contact by others or from engaging in risky or inappropriate conduct themselves. Even tools which

can be used to control or monitor contact and conduct are not a substitute for setting appropriate rules and talking to children about the potential risks. There is a danger that filters switched on by default could lull some parents into a false sense of security, thinking that because a filter was installed they need do nothing more to help their children go online safely. As one respondent to the Call for Evidence said: "…relying solely on content filtering does not make children internet savvy and this is a life skill essential in today's society. However parents cannot attend their children at all times so they are a useful backup."

4.70 Our aim should be to encourage parents to engage with the technical tools available to help keep their children safe. In order to do this, some parents will need to adopt a different mindset by moving from what a psychologist would call a state of pre-contemplation (not engaging with, nor thinking about the issue) to a state of contemplation (deciding to engage with and think about the issue)[2], where they are really thinking about what they can do to make their children safer online. We know that parents take action where an incident has already taken place (see paragraphs 3.16–3.17). However, I believe that a more effective approach is possible, where technical tools take parents through a series of steps which require them to mentally engage with the issues and think about what parental controls are appropriate for their family. Having filters set on by default would not make parents engage, since they are presented with a simple choice of leaving the filter on or turning it off.

4.71 As a possible alternative to 'filtering by default' the HSTF has worked with the British Standards Institution (BSI) to develop a Kitemark™ for filtering software. In order to be awarded the Kitemark™, companies will have to satisfy the BSI that their product meets rigorous standards on things including how effective they are at blocking the content they set out to block, how easy they are for parents to set-up and whether there is a simple process for parents to inform their provider when the filter fails to block a site which seems to contain harmful or inappropriate content. The standard on which the Kitemark™ is based will be reviewed and updated by the BSI at least once every two years to raise the bar by reflecting improvements in the industry standards.

4.72 For these reasons I do not recommend requiring computer manufacturers to pre-install filtering software which is switched on by default. However, take up of parental controls remains patchy, and there is a need for providers to take responsibility, not just for providing software, but for providing it in a way that places child safety in a prominent position and takes parents through a series of steps that bring parents to engage with the issue of child safety. Some other countries have already taken such an approach. For example, since 2004, the French Government has required all ISPs to provide their customers with filtering software.

4.73 **I recommend that the Council ask industry to make sure that:**

- **all computers sold for home use in the UK have parental control software which carries the Kitemark™ and which, when the computer is first set up, automatically takes users through a set of clear prompts asking them whether and how they want to set up parental controls;**

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2 The theories of Prochaska and DiClemente, discussed in more detail in the following chapter, are relevant here.

- **all home internet service providers offer free parental control software which carries the Kitemark™ and advertise this prominently when users set-up their connection.**

4.74   Because parental control software, including content filters, can be a useful tool for parents **I recommend that the education and information strategy specifically includes raising parents' awareness of how to use parental controls effectively, including raising awareness of the Kitemark™ for filtering software and letting them know where they can download free software which carries the Kitemark™.** This is important in order to reach families who are not intending to replace their computer or change their internet service provider in the near future.

4.75   The impact of these recommendations will need to be carefully monitored by the Council. However, if these approaches, which seek to engage parents with the issues and available tools fail to have an impact on the number and frequency of children coming across harmful or inappropriate content online within a three year timeframe, I suggest that Government consider pursuing a policy of requiring content filters on new home computers to be switched on by default.

4.76   Finally, it is worth remembering that parental control software can be used to shepherd children – particularly younger children – towards age-appropriate sites as well as keeping them away from inappropriate sites. For example, some programs allow parents to create extensive white-lists from a library of high-quality, child-friendly sites. Developments such as this are to be welcomed.

Search

4.77   One of the main ways children can become aware of or stumble across harmful or inappropriate content online is through search results, especially since seemingly innocent search terms can return inappropriate results. For example, searching for the name of a female music artist could turn up links to sites claiming to contain pornographic images of that artist.

4.78   Most search engines include a 'safe search' option which excludes results containing inappropriate images or keywords. This is supported by good practice guidance published in 2005 by the HSTF. However, many search engines require users to switch safe search on rather than off by setting their level of filtering to "moderate" rather than "strict" or "highest", and it is not always obvious to users whether the safe search setting is on or how to switch it on. Often the safe search settings are several clicks away from the front page or the results page, and users can only get to them by following generic links with titles like "preferences" or "options".

4.79   Also, evidence suggests that many parents are unaware of safe search settings – only 32% say they are aware of filters on search engines (Ofcom, 2008) – and it is currently fairly trivial for a technologically savvy child to switch the setting off in order to access inappropriate material.

4.80   In order to help children to search safely, **I recommend that the Council work with search providers to make it obvious to users what level of safe search is on and how to turn it on**, for example, by displaying on the search engine's front page or the top of results pages

what level of safe search is in operation as some search engines already do for image searches. This could be done by using traffic light colours to indicate off, moderate and strict filtering, a measure that would make things as clear and simple as possible for children and people who struggle to read English. **I also recommend that the education and information strategy specifically includes raising awareness of how to use safe search settings.**

4.81   Some have called for search engines to set their safe search settings to the highest level by default. In line with the rest of my approach, I do not think it would be appropriate to require this. As I have outlined above, the key consideration is that parents are made aware of the safe search options that exist. Setting safe search to the highest level by default would do nothing to make parents more aware of the tools they can use to keep their children safe, whilst inconveniencing adults and older children who want a less restrictive search. However, **I do recommend that the Council work with search providers to:**

- **give users the option of 'locking' safe search on to a particular computer; and**

- **develop ways for parental control software to automatically communicate with search engines so that safe search is always on when the child uses the computer.**

4.82   There is a need for a shift in people's understanding of their role in keeping children safe online. In a 2005 survey by Ofcom, 32% of parents said they thought the internet was regulated, although 61% of these parents admitted they didn't know who was responsible for this (Ofcom, 2008). What is required is a significant and widespread shift in attitudes, which sees adults moving from an assumption that somebody must be doing something to regulate the internet or that they themselves are powerless, to a situation in which all adults view child online safety as a priority and recognise their role in making children safer. Obviously the social marketing initiatives I recommend as part of the information and education strategy (see Chapter 5) have an important role to play here. However, I believe there is also a need for a simple, memorable and contagious message in this area to bring about what Malcolm Gladwell (2000) refers to as "the tipping point" – the point at which a message starts to spread virally, spreading across society as a whole, so that a much bigger change in attitudes and behaviour comes about in a short space of time.

4.83   I believe that search engines may have the power to effect such a change, because they are the part of the internet in which parents who are otherwise bewildered by technology feel most comfortable – three of the top four most visited websites in 2007 were search engines or web portals that feature search engines (Ofcom, 2008). Parents who express lack of knowledge and sometimes anxiety about the interactive technologies which their children are using, such as social networking sites, still go online to search for information or for products and services. Placing a link such as "Family Safety" on the front page of popular search engines has the potential to engage these parents with messages about their role in keeping children safe. For this reason, **I recommend that every search engine have a clear link to child safety information and safe search settings on the front page.**

Age verification

4.84   Many sites, including sites hosting user generated content, contain some material which adults may wish to access, but which is not appropriate for children. In order to stop children from accessing this material it is important that it is in a part of the site which can

only be accessed by users who have registered as being old enough to access it. Similarly, in order to prevent adults from contacting children inappropriately, some sites use registration to restrict certain areas, such as chat rooms, to children.

4.85   Verifying that the user is the age they claim to be is difficult and there is evidence that many children, and some adults, lie about their age when registering on sites. One of the most effective methods of age verification is requiring the user to register using a credit card. Even if registration is free, a process can be put in place so that a debit and re-credit is shown on the cardholder's bill, so that parents know when a child has borrowed their card for this purpose. However, credit card verification only reveals whether a person is aged over 18. It cannot be used to verify what age a person actually is, and so cannot stop, for example, younger children from accessing material that is only appropriate for teenagers. This is particularly significant given that many popular sites require users to be aged at least 13 in line with US law. Some sites use software to automatically detect phrases, such as slang expressions, associated with underage users, but such technologies are limited in their effect.

4.86   Other methods of strengthening age verification include incentivising children to tell the truth about their age by putting an upper age limit on access to material that will appeal to their age group. If children pretend to be older than they are, they may not be able to access material related to some of their favourite programmes. Also, some sites link access by under-18s to a real world networks such as schools. Users have to join a school network, which means their age has to be verified by a member of that network. Both these methods have the potential to be more effective than simply asking users to confirm their age, but they also have limitations, since children can set up multiple accounts: one with their correct details, and one with a false date of birth so that they can access material that is 'too old' for them.

4.87   There has been discussion around methods that might be used in the future to improve age verification. Some people have suggested that sites should be able to access centrally held personal details about a child in order to verify their age. This, however, would raise serious concerns that sensitive personal data about the child could fall into the wrong hands.

4.88   An alternative might be the development of an industry protocol which allows sites to communicate with parental control software to establish a child's age. But although this could be used to fulfil one objective of age verification – preventing children from accessing inappropriate material – it would not fulfil the other possible objective, which is to prevent adult predators from masquerading as children online.

4.89   In conclusion, no existing approach to age verification is without its limitations, so it is important that we do not fixate on age verification as a potential 'silver bullet'. However, **I recommend that the Council:**

- **keeps research and practice on age verification under continuous review, and disseminates good practice, such as placing a "cookie" onto a user's computer where they have registered with under age details to prevent them from re-registering with false age details;**

- **works with industry to develop ways for parental control software to automatically communicate with websites age-verifications systems to prevent children from signing up to sites with false dates of birth.**

Content labelling

4.90   Throughout the history of the internet attempts have been made to encourage content providers to label the content on their sites to indicate its suitability for children. This approach has two potential purposes: letting the user know if a piece of content is likely to be suitable; and helping parental control software filter out unsuitable kinds of content. An example of a long standing content labelling system is the ICRA framework, established by the Family Online Safety Institute (FOSI) in 2000.

4.91   Despite these efforts, only a small proportion of content on the internet has ever been labelled. A 2006 evaluation of the EU Safer Internet Action Plan concluded that "content publishers (except adult content providers) showed reluctance to adopt the labelling scheme – especially for establishing blacklists" (Mathonnet and Badouin, 2006). There have been some calls for content labelling to be made compulsory. However, such an approach at a UK or even a European level is likely to be ineffective, since it would not be enforceable against content providers outside the UK/EU, and would be impractical in relation to the vast and growing amount of internet content which is uploaded by individual members of the public. Even FOSI, in their submission of the Call for Evidence, are clear that it is "simply not feasible to review all content" and that content labelling "is at best a partial solution".

4.92   Where there is no "editor" to label the content, other approaches, such access controls and the moderation of user generated content, are more appropriate. Frequently, the decisions about what content is suitable for which children at what age are so subjective that they are better left to parents, who can set rules and make use of technical tools to mediate their children's access to the internet. This is a particular issue given the global nature of the internet. Many parents may disagree with age classifications assigned by someone in another country with different cultural norms.

4.93   Although it is important to recognise the severe limitations of content labelling as a general internet safety tool, it can be a useful tool in specific areas where there is an obvious "editor", such as commercially produced audiovisual content. For example, the Broadband Stakeholder Group has recently published good practice principles for audiovisual content information.

Good Practice Principles for Audiovisual Content Information

1. Providers are committed to promoting and enabling media literacy. Their respective approaches to providing content information reflect this commitment.

2. Providers offer content information in order to empower users and allow them to make informed choices about the content that they and their families access/consume/watch.

3. Providers offer information about content that may be harmful or offensive to the general public, and that may be unsuitable for children and young people. In particular, content information is designed to enable parents and carers to exercise supervision over the content viewed by those they are responsible for.

4. Providers employ editorial policies that reflect the context in which their content is delivered. These policies aim to guide users about the content that is available on a particular service so that they can make an informed choice about what to view or not view.

5. While the exact format of the information may vary from provider to provider according to context, providers aim to present it in a way that: is easy to use and understand; gives adequate information to enable the user to make an informed choice about whether or not to access the content; uses plain and consistent language, practical for the medium in which it is made available.

Broadband Stakeholder Group (2008)

4.94 These principles, supported by Ofcom and key industry players, set out common standards for how and when commercial content producers should provide information to help the public make informed choices about viewing content that may be harmful or inappropriate. In addition, to implement the EU Audiovisual Media Services Directive, the UK is in the early stages of developing a new regulatory framework for on-demand television – which is increasingly being delivered over the internet – and this is likely to include standards for consistently applied content information.

4.95 I welcome and support the development of regimes which allow providers of particular types of commercial content (e.g. online games and television programmes) to label their products in order to help children and parents manage what media there are exposed to online.

Children accessing material outside the home

4.96 Research tells us that the most common place for most children to access the internet is in their home, where parents can take steps to manage their access. However, children also access the internet in a range of other locations.
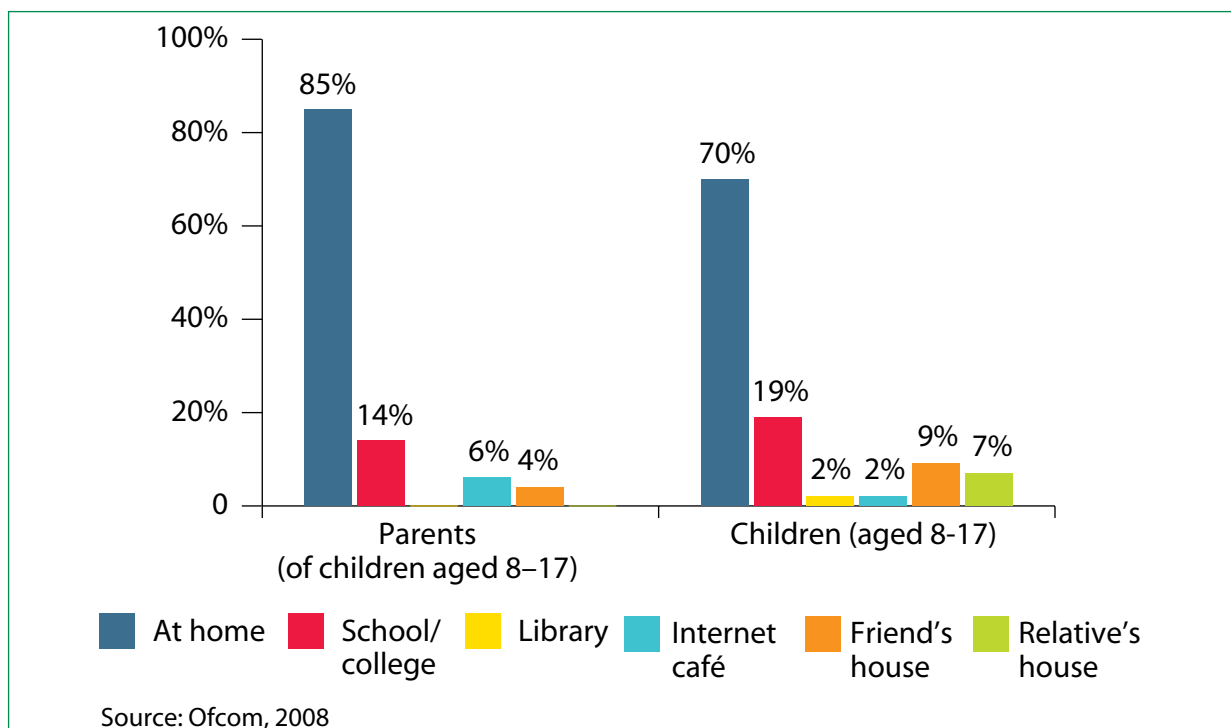
Children's access to the internet

	Any access: 8–17 year olds	Most often access: 8–17 year olds
PC/laptop at home	81%	65%
School/college	86%	26%
Library	12%	1%
Internet café	3%	
Friend's house	23%	2%
Relative's house	11%	2%
Mobile phone	7%	1%
Any internet use	99%	
Don't use the internet	1%	
Use internet but not at home	18%	

(Source: Ofcom, 2008)

4.97 We also know that the home is the most likely venue for children to come across harmful or inappropriate content online. 70% of 8-17 year-olds who came across such content say they were at home when this happened (Ofcom, 2008). However, children are also accessing harmful or inappropriate content outside the home.

Where children came across inappropriate content: what parents thought compared to what children reported

Source: Ofcom, 2008

Schools

4.98 Slightly more children say they have access to the internet at school (86% of 8-17 year-olds) than at home (81%) and for over a quarter of children (26%) school is the main place they go online (Ofcom, 2008).

4.99 It is important to note that, as with access at home, technical tools such as filtering can make children safer online but they are no substitute for teaching children to use the internet safely and responsibly. The role of schools in teaching children how to manage their own access is discussed later.

4.100 A range of measures are in place to restrict children's access to harmful and inappropriate material when they are at school. Most schools' access to the internet is filtered locally through the school itself and beyond, through local authorities or Regional Broadband Consortia which provide internet access to schools. Local authorities provide technical expertise to schools, with 96% of local authority respondents in the 2007 Harnessing Technology in Schools Survey saying they provided guidelines on e-safety (Kitchen, Finch and Sinclair, 2007). Becta – the Government's educational technology agency – provides national advice and support to schools and local authorities. They also work with industry to accredit suppliers of internet services for schools, making sure that they meet and maintain standards in content filtering.

4.101 In a survey of school staff, 80% reported that their school had filtering provided by the local authority, 73% reported that filtering was provided by their ISP (Barrow, 2006)[3], 62% reported that their school monitored pupils accounts,15% reported that their school used a 'walled garden', where children can only access approved sites, and 5% reported the presence of in-house filtering. Of these staff, 77% of those with a filter believed it was an adequate safety measure (against 15% inadequate), 79% believed their walled garden was adequate (against 11% inadequate) and 81% believed their monitoring of accounts was adequate (against 12% inadequate). This research also found widespread variation in teacher's ability to adjust the measures in place, with only 4% saying that they were able to adjust filtering levels according to their teaching needs.

4.102 It seems, therefore, that although measures to manage children's access to the internet in school are widespread, there is room for improvement. Indeed, of the 16% 8-17 year-olds who came across harmful or inappropriate content online, 19% say they were at school when this happened (Ofcom, 2008).

4.103 **I recommend that:**

- **all schools and local children's services use a Becta accredited filtering service;**

- **Becta continues to work with schools and local authorities to improve their specification for filters and raise levels of staff understanding about how to use them effectively.**

4.104 Monitoring of the implementation of this recommendation should take place as part of arrangements to inspect schools performance on e-safety, discussed in Chapter 5.

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3 The duplication of those reporting local authority and ISP provided filtering may be due to confusion amongst respondents.

Friends and relatives houses

4.105 Some 9% of 8-17 year-olds who came across harmful or inappropriate content online say they were at a friend's house – and 7% at a relative's house – when this happened (Ofcom, 2008). There are doubts about whether parents have an accurate picture of how much their children are accessing the internet outside the home. For example, 23% of children aged 8-17 say they use the internet whilst at a friends house, but only 10% of parents think their children go online in this way.

4.106 Parents should be aware of the need to take an active role in talking to grandparents, childminders and the parents of their children's friends about their expectations on e-safety in the same way as they might talk about safety offline: saying "She's not allowed on the computer unless you're there" in the same way as they might say "She's not allowed to go to the park unless someone goes with her". **I recommend that messages to the public around e-safety:**

- **are targeted towards grandparents and other relatives as well as parents; and**

- **include the need to consider e-safety at times that children are not in the family home.**

Mobile phones

4.107 Increasingly, children have phones which allow them to access the internet – 37% of 11-16 year-olds have access to the internet via a mobile (ChildWise 2008). This presents a new set of challenges given that children can access the internet in physical spaces where parents and other responsible adults are not around to manage their access.

4.108 In anticipation of the growth of mobile internet access the UK mobile industry published in 2004 a *UK Code of Practice for the Self-regulation of New Forms of Content on Mobiles*. Under this code, commercially provided content for mobiles that is unsuitable for users under 18 is classified by the Independent Mobile Classification Body (IMCB) and internet content is filtered by the network provider in order to block access to content which is unsuitable for under 18s. Users are only able to access content classified as 18+ or have unfiltered access to the internet if they have satisfied their network's age-verification process to demonstrate that they are aged 18 or over.

4.109 The mobile industry is an example of a part of the 'internet industry' which has signed up to a clear, independently monitored code of practice and Ofcom is now working with the mobile industry to review the code. However, at the moment it is difficult to establish the effectiveness of work in this area. Only 5% of children aged 8-17 who access the internet via their mobile phone say they have come across harmful or inappropriate content in the last six months. But only 7% of 8-17 year-olds and 14% of 16-17 year-olds say they access the internet using their mobile phone (Ofcom, 2008).

4.110 The proportion of users accessing the internet on their mobile phone is set to grow. Research suggests that "the Mobile Web is at an early state of development, but we expect Mobile Web usage to grow as phone performance improves, sites optimise their content for the small screen and operators fine tune their tariffs…" (ComScore, 2007). It may be that as more children start to use the internet on their phones, the risk of them accessing harmful or inappropriate material will increase. Mobile network providers expect the use of

social networking services via mobile phones to grow in the near future[4], and I have already discussed (see paragraph 3.118) the difficulties reported by some mobile providers in securing safe access to social networking services for their under 18 users.

4.111 It is also possible that a system based on 18+ and under-18 suitable content will not prove sufficiently granular as mobile internet access becomes more popular. In France, at least one network provider has committed to providing an under-12 filtering option in addition to the under-18 option.

4.112 At the moment I do not see a case for specific recommendations around the regulation of mobile internet content. **However, I recommend that the Council monitor the changing risks for children from mobile internet access and work with the mobile industry to address them, including exploration of the need for more granular levels of filtering.**

4.113 Also, since 21% of 5-7 year olds have a mobile phone (Ofcom, 2008), **I recommend that the mobile phone industry consider offering specific products for young children, such as phones without internet access.**

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4 Mobile Broadband Group submission to the Call for Evidence.

NET
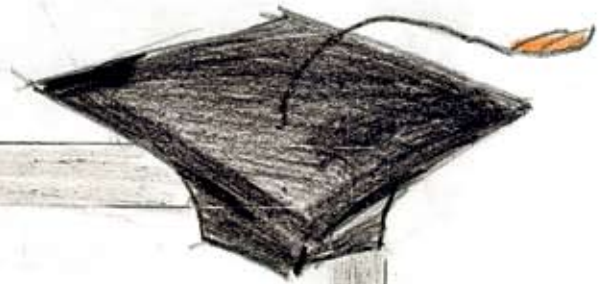
Staying Safe

- Install anti-spyware and anti-virus programs
- Educate yourself and family about the risks
- Children must be careful when online.
- Do not tell anyone personal details
- If you see anything your not sure about tell an adult.

SMART

Competition runner-up: Lauren Bain, age 10

Chapter 5

The Internet: Better Information and Education

5.1   In addition to the specific recommendations that I have outlined for reducing availability of and restricting access to harmful and inappropriate material online, I believe that crucial and central to this issue is a strong commitment to changing behaviour via a sustained **information and education strategy**, focused on raising the knowledge, skills and understanding around e-safety for children, parents and other responsible adults (see Chapter 3). Such a strategy would need to address two specific areas:

- *The generational digital divide –* this would mean addressing the very real needs of parents, teachers and others involved in the care of children and young people in order to empower to address online safety issues with the children and young people in their care, so that parenting and education that addresses issues of safety and wellbeing is understood as being both related to the offline and the online worlds.

- *The needs of children and young people –* this would mean providing appropriately targeted information to enable children and young people themselves to develop their own online safety awareness and skills.

5.2   A useful analogy here would be to think about how we manage risks related to public swimming pools[1]. Here we have an area open to the public because it affords many benefits. But swimming pools have a number of safety measures in place to in order to manage the risks (e.g. of injury, drowning):

- There are clear safety information signs around the pool area that advise on appropriate and inappropriate behaviour.

- There are swimming aids available for younger or the less confident swimmers (e.g. water wings, rubber rings, floats).

- There are different pool areas – shallow for those that need to stand and are less confident at swimming all the way to deeper waters for confident swimmers and divers.

- There are lifeguards who can assist swimmers (of all levels of competency) in trouble, signal to those who are behaving in a risky manner, respond to complaints about swimmers' behaviour, and even ask them to leave the pool if warnings are not heeded.

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1 I am grateful to Adam Thierer for suggesting children's ability to swim as a model for thinking about this area.

- There are fences, doors, locks and alarms to prevent access to the pool area when it would be unsafe to go in.

5.3 In the online space, a range of analogous safety features can be used to protect children:

- Where the swimming pool has safety notices, a website might have an acceptable use policy.

- Just as the swimming pool provides swimming aids, online service providers can tailor their services to younger users. For example, a social networking site might have higher default privacy settings for children.

- Instead of providing different pool areas, in the online space we have content filters, safe search options and age verification systems to keep children away from unsuitable areas of the internet.

- In place of lifeguards, online services have moderators and notice and take down procedures to enforce acceptable use polices.

- Instead of fences, doors, locks and alarms, parents can use parental control software to monitor children's activity, set time limits for usage and 'lock' safe search or content filtering settings on.

5.4 However, children are children and across childhood will take risks for different reasons (e.g. lack of critical evaluation skills; lack of impulse control; part of a process of individuation and creating an identity). Risk taking is a developmental imperative of childhood – we know that there are also tragic cases where children will get through locked doors, climb fences, ignore safety signs and jump into waters that are too deep for them and in some tragic cases drown.

5.5 For this reason we also **_teach children how to swim_**.

5.6 In relation to online safety, we need to think about ways to empower adults and children. This means developing adult skills so that they feel empowered to have conversations with children about online safety as well as understand how to take appropriate technical steps to manage online risks on behalf of their children, which are appropriate to their age and competence. Furthermore, we will empower children to develop their own skills and become strong swimmers in these rapidly moving online waters. This is part of what some people call 'media literacy'.

Media Literacy

We need to empower people with the skills, knowledge and confidence they need to embrace new technology to make the decisions that will protect themselves and their family. In some circles this is called being 'media literate'. However, 'media literacy' is an abstract title, which is difficult to translate into something that is meaningful to the public.

Ofcom defines media literacy as "the ability to access, understand and create communications in a variety of contexts". This is a widely recognised definition for understanding the issues around media literacy in society. However, an approach that is perhaps more useful for understanding the role of media literacy in improving e-safety is ensuring that children *broaden and deepen their skills, knowledge and understanding* to use new technology. While this is a necessary discussion, it is equally important to ensure that the wider debate around defining media literacy does not distract focus from what should be the primary objective of protecting and empowering young people.

5.7   Finally, all this must not be a top-down approach that is based on what we as adults do to protect children and manage their online behaviour. The process of increasing the understanding and management of the online world and ensuring the safety of our children must take place in a way that is collaborative. We, the adults, must learn from children and young people themselves as well as empowering them to take responsibility for their own online behaviours.

5.8   I believe the information and education strategy needs to be robust, targeted and well resourced. I set out my evidence for this below.

The evidence base for an information and education strategy on e-safety

5.9   Many responses to the Call for Evidence supported the view that parents had very real concerns and fears about the risks their children may be exposed to on the internet. Those fears were exacerbated by a sense that their children knew so much more about the internet than they did, or that at least children thought they did. This left parents feeling isolated, helpless and unable to effectively protect their children. A recurring message was that the internet was creating a 'digital divide' within families and between generations.

5.10   Today's young people – the first young people to grow up with the internet – are often called the 'internet generation'. They see themselves as the family experts on the internet and are increasingly bullish about their enhanced status within the traditional family dynamic. However, questions remain over whether such confidence is enough to provide young people with the wider critical skills to cope with potential risks.

5.11   An informed account of the nature of society's relationship with the internet is crucial if we are to counter the sometimes justifiable anxieties and confusion around the potentially negative aspects of the internet. Fortunately, there is now a very considerable body of consumer research literature within the UK on the ways in which children, young people and their parents are accessing and using the internet, and their levels of understanding, practices and attitudes.

5.12   The evidence collected for this Review highlights a number of important trends.

The internet is much used and valued by children, young people and parents, and the importance of the internet to the child increases with age

5.13   Ofcom's research shows that overall, 99% of children aged 8-17 say that they use the internet, and that 80% of households with children aged 5-17 have internet access at home – a growing trend. This compares to 57% of households without children. While TV remains dominant for children aged 5-15, the use and importance of the internet to the child increases with age, both in terms of hours of use and in its status as the medium the child would miss the most. Average hours of internet use continue to increase across all age groups, with the average for 12-15 year olds now at 13.8 hours per week (Ofcom, 2008).

5.14   This was reflected in my focus group survey. Overall, children and young people were overwhelmingly positive about the internet, using it for communicating with friends, for pleasure and fun, and for research, whether for homework or a hobby.

"Loads of games, dress people up, research for things, do science, maths."

(7-8 year-old girl, Birmingham)

5.15   Parent's attitudes to the internet tended to be influenced by: their own knowledge and experience of the web; their parenting style; the age of the child; their child's personality; their child's birth order and whether or not they had had any negative experiences of their children using the internet or knew someone who had. However, on balance most parents were positive about the internet. It was seen as a part of modern life, a vital research tool for education and a source of communication and entertainment.

Parents are anxious about the generational digital divide in knowledge and experience about the internet

5.16   In my focus group study, parents acknowledged that their children were much more competent than they were in their use of the internet. Most attributed this to the fact that children today, unlike their parents had grown up with the internet.

"I think as well, I'm not totally computer literate. I think there's a gap between you and your kids."

(Dad, Glasgow)

5.17   This power shift has impacted in a number of ways. Some parents acknowledge their children's superior knowledge and embrace the difference. Other parents feel threatened and confess that they did not always handle the situation well as a result – their anxiety led to them losing their temper or avoiding addressing issues around technology. Most importantly, the difference in ability means that parents do not feel fully qualified to give advice about how to manage risks associated with the internet. For this reason, many felt that they would probably not be their child's first port of call if a problem did arise.

[Any bad experiences?] "They wouldn't tell me."

(Dad, Glasgow)

5.18   This perceived inability to deal with internet risks is undermining parents' confidence in their ability to raise their children responsibly. Parents see the issue being more about manipulating technology, which they are unfamiliar with, rather than managing behaviour, over which they have much more control.

5.19   These attitudes are supported by consumer research findings. Almost half of all parents (47%) believe their child is more skilled at the internet then they are (Ofcom, 2008). This is especially true of the parents of older children: 61% of parents of 12-17 year olds. Only a quarter of parents feel confident enough to help or supervise their children online (Livingstone and Bober, 2005).

Higher skill levels mean children are increasingly confident about using the internet although they may not have the maturity and wider awareness to be safe online

5.20   Focus group research showed that as children become older, they become increasingly aware that they know more about using the internet than their parents and are increasingly confident about what they see as their enhanced status within the family dynamic. Teenagers in particular can be quite sceptical about their parents being in a position to advise them on something they know and understand very little about.

"It makes you feel like. 'Look up at me. All bow."

(12 year old girl, Midlands)

5.21   These attitudes are supported by evidence that 69% of 9-17 year olds dislike having their internet use restricted or monitored by their parents (Livingstone and Bober, 2005). As a result, 63% of children and young people admit to hiding their online activities from their parents, who they feel are less able to effectively, monitor what they are doing.

"When they get super clever they turn off the second you arrive"

(Mum, Bradford)

5.22   However, while most children may have better technical skills than their parents, this does not necessarily translate into a greater understanding of e-safety. Research shows that, not only do the most skilled young people fail to avoid online risks, but that their risky encounters increase with increased use (Livingstone and Bober, 2005).

5.23 This highlights a need to provide children with not only the skills, but also the knowledge and understanding to use new technology safely. There is much evidence to suggest that younger people, despite their confidence, lack the wider competencies to protect themselves. For example, 38% of pupils have said that they trust most of the information on the internet, while 21% have admitted to copying something from the internet and handing it in as their own (Livingstone and Bober, 2005).

5.24 Such over confidence suggests that children and young people have a false sense of security when it comes to protecting themselves online. Despite their higher skill levels, 46% of children have said that they have given out personal information to someone that they have met online, whilst a smaller percentage of children – between 8% (Livingstone and Bober, 2005) and 25% (CEOP, 2007) – say they have met face to face with someone whom they first met through the internet. Furthermore, the likelihood of coming across potentially inappropriate material increases with the age of the child.

A mixed picture emerges regarding the degree and effectiveness of parenting oversight of internet use at home

5.25 This sense of a generational digital divide is reflected in what parents and young people say about the presence of 'internet rules' at home. The research indicates that parents tend to claim greater presence and use of these rules compared to children, especially in the case of children under 15 (Ofcom, 2008).

5.26 While parents generally seem to have a good understanding of the child's internet use at home, there are some notable exceptions. For example, around a quarter of parents whose children have a profile on a social networking site are unaware of this (Ofcom, 2008). One possible reason for this is unsupervised use. 16% of children have a computer with internet access in their bedroom, which is a rising trend (Ofcom, 2008). In fact, children's bedrooms are increasingly becoming multi-media centres with television, webcams, game consoles, etc. – and the penetration of technologies into bedrooms increases with age. Parents offer mixed messages about whether they have adequate measures in place to guard against less supervised use.

"Just coz it's in their bedrooms you need to parent it effectively."

(Dad of teenage boys, Leicester)

"I haven't got a clue what she is doing on MSN. She can talk to 10 friends at once without leaving the room."

(Dad, Midlands)

5.27 Finally, while the majority of parents are confident that they have done what needs to be done to help their child stay safe online, there is a sizeable group of parents (around one in four) who say they do not have any rules in place (Ofcom, 2008).

Parents either underestimate or do not realise how often children and young people come across potentially harmful and inappropriate material on the internet

5.28   While the majority of children and parents agree that the child would tell the parent if they came across something that worried them, this does not always seem to be the case. Overall, 16% of 8-17 year olds say they have come across harmful or inappropriate material in the past six months, while 12% of parents with children in this age group say that their child has. Almost 10% of parents do not know if their child has come across harmful or inappropriate content (Ofcom, 2008).

5.29   Responses from parents and children indicate that most of this material was seen at home, although other locations such as school or friends houses are also relevant. This has implications for the rules and the levels of trust parents have with their children to limit unwelcome exposure.

"We were talking with my daughter today in the car and she always clicks onto some friend she's made in Ireland and she knows her name and I said does she know your name? 'Yes.' And I said: 'Did you just tell her your first name?' 'No, my whole name.' and I said: 'I hope you didn't give her your address?' 'No, I don't think so.' I didn't think before she would give her address. Scary."

(Mum, London)

The majority of parents (57%) do not know where to go to get information about how to protect their children online

5.30   This figure is most striking given the huge amount of information produced by all those with an interest in the internet including individual websites, industry, Government, schools, enforcement agencies, and others. Between 5% and 8% of parents mentioned other websites, schools, family/friends and colleagues or the library. This suggests there is a serious gap in the transfer of knowledge about internet safety.

5.31   There is some evidence which suggests that scare stories dominate parents' experiences of the internet. Clear, authoritative information about what is typical net use by age and sex, and the real issues and dangers that are likely to arise at each development stage would help parents put the risks in perspective and better equip them to manage those risks.

Four in ten parents would not know who to complain to if they came across something potentially harmful or inappropriate

5.32   There is evidence that parents are unsure or confused about where to go if they have a complaint about harmful or inappropriate content on the internet (Ofcom, 2008). Although very few parents say they would not want to make a complaint (3%), some 38% of parents said they did not know who to complain to. Of those that said they would complain, many said they would complain to the police (30%) or their ISP (14%). Only 11% said they would direct the complaint to the website concerned, which would often be the most appropriate response.

5.33 This was supported in feedback from the focus group research. Most respondents felt that the scope of the internet 'problem' was huge and 'unregulated'. Whilst only the informed were able to make recommendations for improving safety, all welcomed suggestions for sources of advice, guidance about safety issues and how sites operated, good filtering software and more information about responsible internet service providers.

There is evidence to suggest that the parents of children from more socially disadvantaged backgrounds are less able to protect against the risks of the internet and require additional support

5.34 Our research showed that parents who were more experienced with the internet – typically those who use the internet a lot for work – tended to embrace technology and the changes to family life that came with it. These parents were not fearful of the internet. They had the dangers in perspective and felt that although there were risks attached, there were clearly huge benefits to their children having access to and being able to use the internet.

5.35 Those parents who were less experienced with the internet could feel out of their depth and overwhelmed by the risks, and their concerns were easily fuelled by media stories that focused on the most extreme risks (e.g. online predators) which would often be their sole source of information about the internet. They were often very worried about their children's internet use but at a loss to know how to monitor or control it.

"the whole of technology scares the life out of me. How do I set it up sp that it's safe?"
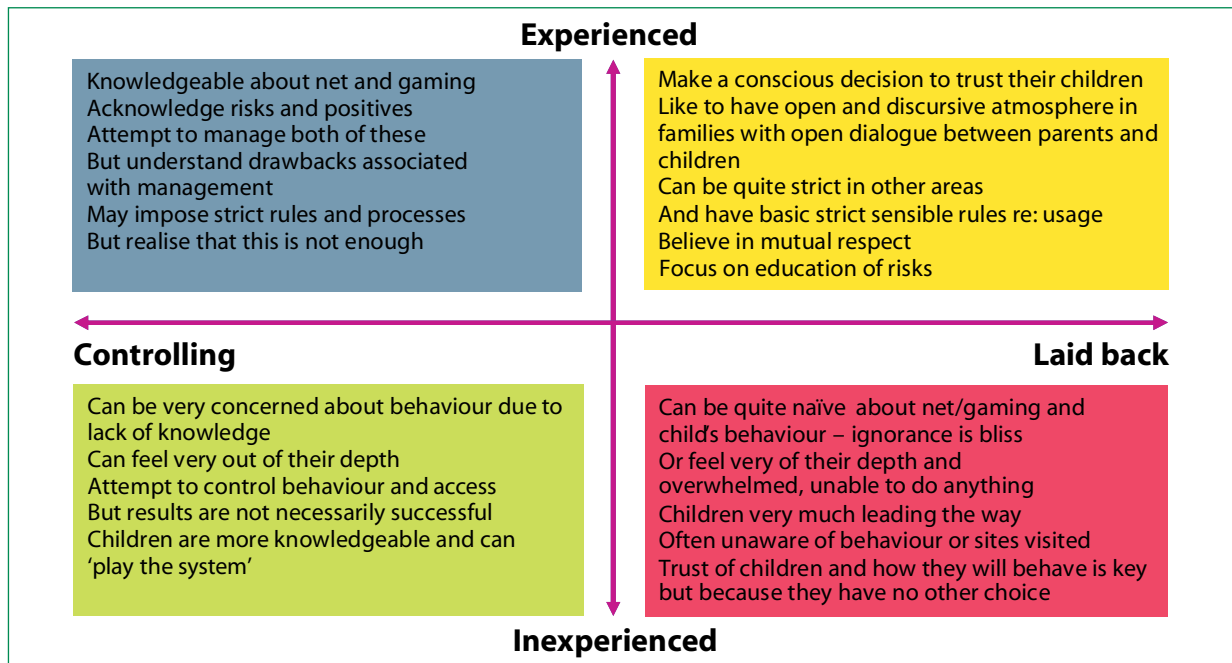
(Mum of 5 and 7 year old, Sheffield)

5.36 These concerns are also clearly fuelled by media coverage of paedophile activity.

[In response to a question about the likelihood of contact from online predators]
"It's 90% likely."

(Mum, London)

Experience of technology determines the effectiveness of online parenting

Experienced

Knowledgeable about net and gaming
Acknowledge risks and positives
Attempt to manage both of these
But understand drawbacks associated with management
May impose strict rules and processes
But realise that this is not enough

Make a conscious decision to trust their children
Like to have open and discursive atmosphere in families with open dialogue between parents and children
Can be quite strict in other areas
And have basic strict sensible rules re: usage
Believe in mutual respect
Focus on education of risks

Controlling

Laid back

Can be very concerned about behaviour due to lack of knowledge
Can feel very out of their depth
Attempt to control behaviour and access
But results are not necessarily successful
Children are more knowledgeable and can 'play the system'

Can be quite naïve about net/gaming and child's behaviour – ignorance is bliss
Or feel very of their depth and overwhelmed, unable to do anything
Children very much leading the way
Often unaware of behaviour or sites visited
Trust of children and how they will behave is key but because they have no other choice

Inexperienced

5.37   There is more than one way to parent children online. Parents can take a more controlling approach, where they put the emphasis on restricting their child's access to the internet. Alternatively, parents can take less controlling approach, where they put the emphasis on building their child's resilience to online risks. One of the key messages from the qualitative research conducted for the Byron Review is that the degree of control exercised by parents is not what determines the effectiveness of their online parenting approach. What matters more is the level of experience on which the approach is based. Parents who are experienced with the technology choose an approach that works for their family, whereas less technologically experienced parents tend either to be naïve about the risks, and so less controlling, or they are panicking about the risks, and adopting a controlling approach in a way that is reactive and not very effective.

5.38   In general, parents equate their ability to protect their children when online with their relative skill levels, so children of parents with few internet skills are potentially disadvantaged in terms of protection from the risks. This is supported by separate research by ICM for UK Online Centres (UK online/ICM, 2007) which shows that only 13% of parents from lower social economic groups use the internet on a regular basis, while 71% never use the internet. Parents from these backgrounds also score themselves poorly on their ability to help their children with using the internet. Only 28% felt they could help their children with cyber bullying, 38% with encountering offensive or inappropriate material.

5.39   These figures are to be contrasted with research that shows that greater exposure to the internet overall, which is higher amongst more affluent families, results in greater exposure to potential risks (Livingstone et al, 2005). They point to the existence of different challenges for different groups of parents and children.

Although parents and children do have concerns about the internet, for both, the benefits outweigh the risks

5.40   Ofcom's research, supported by the evidence from our focus groups, showed the vast majority of parents agreed that the internet allowed children to discover interesting, useful things that they did not know before. Both parents and children overwhelmingly agreed that the internet helps children with school work, and almost two thirds of the parents and children agreed that children who do not have or use the internet are at a disadvantage.

"The internet can be a useful tool for education."

(Dad, Glasgow)

5.41   Furthermore, the majority of parents felt that on balance the internet was safe. Children could surf the internet in the safety of their own home, and that it kept them off the streets and gave them something to do. Parental concerns about their children's health and safety centred more on issues such as youth violence, bullying and obesity.

"I'm concerned about street violence – the gang culture."

(Dad, Glasgow)

5.42   The majority of parents agreed that they trusted their child to use the internet safely and that it was safe for them to go online, especially as they became older. In general, children interviewed were more confident of their ability to manage online risk than their parents were.

Taking a strategic approach to information and education around e-safety

5.43   The overall message from the evidence is that there are different gaps in the knowledge, understanding and skills of different groups of children and parents. For some, this is about a lack of awareness about what the risks are and/or a lack of information about how children can stay safe online and how their parents can empower them to do so. For example, many parents do not understand that helping children to manage risk and be safe online is an equivalent parental responsibility to helping them manage risk and be safe offline. Either they are unaware of the risk, or they lack the confidence to apply their offline parenting skills to the online environment.

5.44   For others, the issue is a lack of the necessary skills. Many children have superior technical skills to their parents when it comes to the internet. However, they lack the ability to comprehend and critically assess online material and the implications of their online behaviour (see my earlier discussion of 'media literacy' at paragraphs 5.6–5.7) and this impairs their ability to use the internet safely.

5.45   There is a range of activity in place to raise awareness, provide information and increase skills around e-safety. This is discussed in more detail below. However, while there are some examples of strategic, partnership approaches to promoting e-safety, I have found that overall, performance is patchy. The result is that efforts to improve online safety can be undermined. While there is little question of the commitment, much energy is wasted

through unnecessary duplication and inefficiency. Initiatives have the appearance of developing in an uncoordinated, almost ad hoc way, with no clear structure or direction regulating where money is spent or where there are gaps.

5.46   As described earlier, **I recommend that the national strategy for child internet safety, which is to be developed by the UK Council for Child Internet Safety, include an information and education strategy. This would incorporate two strands of activity:**

● **a properly funded public information and awareness campaign on child internet safety; and**

● **sustainable education and children's services initiatives to improve the skills of children and their parents around e-safety.**
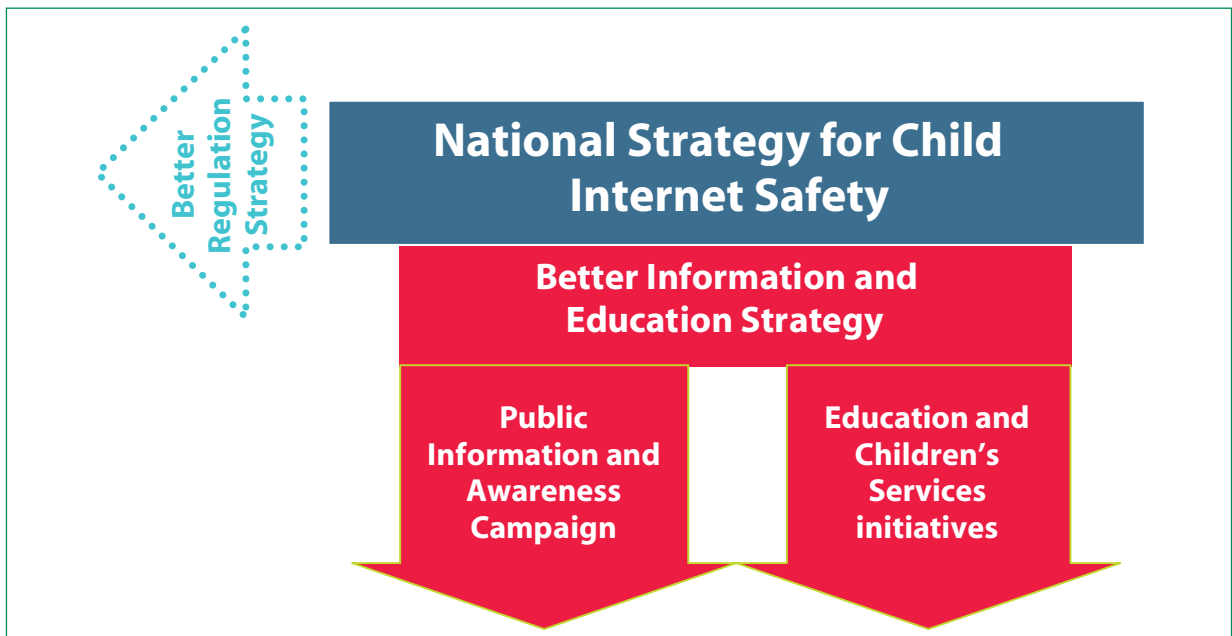
5.47   The rest of this chapter sets out features of these two strands which I believe are necessary to ensure their success.

5.48   This strategy could be overseen by a sub-group of the Council, allowing a wide range of different stakeholders to be involved in steering the strategy. It would be supported by the Council's secretariat, allowing it to draw on the influence and expertise of DCSF in working with the education and children's services sectors.

5.49   Building on the findings of the research sub-group to the Council, this strategy should develop short, medium and long term targets and measures of success, which should target immediate areas of concern, and develop longer term strategies that focus on changing public attitudes and behaviour. These would need to be capable of addressing the needs of future generations as they come online and responding to the development of new technologies and applications.

A successful public information and awareness campaign

5.50   A public information and awareness-raising campaign on child internet safety must be carefully designed in order to support the learning of adults (parents, teachers and those involved in caring for children) many of whom are unfamiliar or not confident with the online world. At the same time it needs to empower children and young people, many of whom already have sophisticated online skills but not necessarily wisdom, self-awareness or understanding of their own safety needs.

5.51   To achieve these goals I advocate the adoption of a social marketing approach to achieve specific behavioural goals for a social good. This involves targeting specific messages to address the needs of different groups of individuals as well as ensuring that these messages are delivered effectively, through appropriate channels.

The right messages for the right people

5.52   The ultimate aim of this campaign is to change behaviour: encouraging children to adopt safer online behaviours, encouraging parents to parent effectively online and encouraging others who interact with children (grandparents and other relatives, teachers and the wider children's workforce) to support children to stay safe online.

Stage theory of behavioural change

5.53   Mounting evidence suggests that behaviour change occurs in stages or steps. So called 'stage theories' of behaviour change underline the importance of matching targeted behaviour change interventions to an individual's stage of readiness to change their behaviour. Such an approach would enable us to address the differing needs of different groups of children and parents around e-safety.

5.54   Prochaska and DiClemente (1983) describe how individuals move through a series of 'stages' in order to change their behaviour. Their 'Stages of Change' model successfully underpins a number of well known approaches to health behaviour change (e.g. losing weight; stopping smoking; adopting safer sex practices). The five stages of this model of behaviour change describe the different stages of thinking that any one person could be at in the process of changing their behaviour:

- Precontemplation – not thinking about or intending to change behaviour.

- Contemplation – thinking about or intending to change behaviour but may be ambivalent or procrastinate.

- Preparation – intending to and ready to change behaviour.

- Action – making obvious changes to behaviour.

- Maintenance – sustained behaviour change.

- Relapse – falling back into the original pattern of behaviour.

5.55 In order to effect sustained behaviour change around online safety, any successful social marketing campaign needs to provide information, advice and support across all these stages. As the grid below sets out:

Stage of change	Who is at this stage?	Type of intervention needed	Implications for a social marketing campaign on child e-safety
Precontemplation (Not thinking about or intending to change behaviour)	Children who are unaware of online risks. Children who do not find adult concerns about risk credible, and want to take risks. Parents and other adults who are not aware of online risks.	Need a shock. Sustained blanket marketing across all media focused on the risk, to encourage a re-evaluation of current behaviour targeted at attitudes of each group.	Hard-hitting message to children highlighting the risks (eg. ThinkUKnow) which draws on children's credible concerns (eg. cyberbullying). Hard-hitting message to parents and other relatives highlighting the risks.
Contemplation (Thinking about or intending to change behaviour)	Children who are aware of online risks but don't really think it will happen to them. Parents who are aware of online risks but don't really think it will happen to their child (may lack a clear picture of what their child is doing online). Parents who are aware of the risk but do not know how to protect their children.	Need education and basic tools that don't overwhelm them. Place products and information in front of them while continuing to encourage an analysis of the pro's and con's of behaviour change.	Targeted message to children addressing complacency (eg. "I thought I knew"). Targeted message to parents addressing complacency and emphasising that letting your child go online is like letting them outside the front door (eg. "Do you really know where they are?"). Putting safety information in prominent places. Complimented by design of popular online services such as search engines (see paragraphs 4.77–4.83).
Preparation (Intending to and ready to change behaviour)	Children who may understand the need to stay safe online but worry that it will involve being 'uncool'. Parents who are aware of the risks and aware of what to do but lack the confidence to parent online. May want to talk to child about e-safety, but intimidated by child's superior technical ability.	Need tools and support. Validate the underlying skills and abilities that will enable new skills and behaviours to be learnt. Encouragement and reinforcement: "you are being a good parent", "it's cool to be netsmart".	Positive messages about e-safety from people who have credibility with children and young people. Reassuring message about the application of existing parenting skills to the online context. Complimented by support for parents via schools, children's services and their workplaces and products that prompt parents to engage (see Chapter 4).

Stage of change	Who is at this stage?	Type of intervention needed	Implications for a social marketing campaign on child e-safety
Action (Making obvious changes to behaviour)	Children who are trying to use safety tools (such as privacy settings) but find it difficult. Parents who are trying to use tools to protect their children online but have found them too difficult to use. Parents that are struggling to communicate with their children about e-safety.	Need clear information that supports and prompts behaviour change with clear rewards for doing so.	Clear information about how to stay safe and what to do if you have a problem. Complemented by safety tools that are easy to use, featuring clear, simple prompts (see Chapter 4) and learning about safety in school (see paragraphs 5.89–5.94). Clear information about how to keep your children safe and what to do if you have a problem or want to complain. Complemented by safety tools that are easy to use (see Chapter 4). Simple, clear tips for how to raise e-safety issues with children. Complemented by support for parents.
Maintenance (Sustained behaviour change)	Children who have adopted safe behaviours but are tempted to take more risks as they get older. Parents who have started to parent effectively online but may lapse due to other pressures on their time/ attention.	Need sustained level of information available in places that the aware consumer would go to. Also enables them to become part of the behaviour change system.	Sustained messages to children about the risk that are tailored to different age groups. Information for parents and children about where to go if they have a problem and how they can get involved in making the internet safer (eg. through community moderation – see paragraphs 4.4–4.13).
Relapse (Falling back into the original pattern of behaviour)	Adolescents who have a developmental imperative to take risks and ignore previously heeded safety messages. Parents who don't shape their interventions to their child's developing needs or become less anxious about younger siblings.	Refreshed campaigns targeted at those who have relapsed.	Targeted messages to adolescents and their families, restating the need to behave safely online / parent effectively online.

Other relevant considerations in finding the right messages

5.56 In addition to thinking about the stage model of behavioural change that different groups of children, parents and other adults are at, I believe that a number of other psychological theories can help us make sure that our messages about child internet safety have maximum impact.

5.57 Self-efficacy – a person's confidence in his or her ability to take action and persist in action – has been described as perhaps the single most important factor in promoting changes in behaviour (Bandura,1986) and movement through the stages of behaviour change (Oldenburg, 1999). In general, higher levels of self-efficacy for a given activity are associated with higher participation in that activity. This gives us a potential insight into addressing the generational digital divide. Messages which encourage adults to recognise their existing skills and grow in confidence about their online parenting ability are vital.

5.58   One of the key long term goals of a social marketing campaign in this area should be to promote a culture of responsibility around child online safety. People respond to messages which portray a particular type of behaviour as being to their advantage (psychologists call this social learning theory) or as being consistent with a social norm to which they subscribe (psychologists call this social cognitive theory). Messages to children should emphasise their responsibility for keeping themselves safe, portraying safe online behaviours as 'cool' with strong validating messages from peers and people that children respect, including those in the public eye. Messages to parents should emphasise that online parenting is an important part of keeping their child safe, and that this outweighs the potential disadvantages of conflict with their child and feeling foolish because the child 'knows more'. Messages to those who work with children should emphasise, in line with messages about offline safety, that online child safety is everyone's responsibility and not 'someone else's area'.

The right channels to deliver the messages

5.59   In addition to having a carefully developed set of messages which address the needs of all the different sections of the public whose behaviour needs to change, it is important that the public information and awareness campaign is delivered through the most effective combination of channels.

An approach based on joint working

5.60   The Government has had considerable experience and success in raising public awareness on issues of national importance in areas such as drink driving and smoking. As such, I believe that a properly resourced contribution from Government is necessary for the success of this campaign. This could involve tapping into initiatives like Parent Know How, a new programme to enable Government communication with parents through a multi-media approach including telephone helplines, text messaging, social networking tools, an information system to allow parents to search for parenting services and print content in magazines and newspapers.

5.61   However, in line with the rest of the Council's work, I believe that a truly effective campaign would make use of the range of channels that are available across Government and other public sector organisations including law enforcement, industry, the charitable and voluntary sector, broadcasters, public broadcasting channels and other media. A shared and multi-stakeholder approach offers a number of significant advantages, not least shared cost and efficiency savings, a strategic approach to disseminating the messages and less duplication. A joint campaign with combined resources and talents will also deliver much greater penetration of the core messages to a wider percentage of the population. For this reason, I believe that the Council should develop and deliver such a joined up strategy.

> **The Irish approach – makeITsecure**.
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> The Irish makeITsecure campaign is an IT security awareness campaign run by a public/ private sector consortium led by the Department of Communications, Marine & Natural Resources in the Republic of Ireland and the Department of Finance and Personnel in Northern Ireland. Corporate partners include Microsoft, Symantec, Irish Bankers Federation, eircom, RTE, O2, Vodafone, BT and 3 mobile.
>
> The coalition assembled with the common goal of creating awareness for computer security issues. makeITsecure 2008 is the third year of this nationwide campaign, which was launched on 11th February and run over two weeks to 22nd February. The 2008 campaign was the first run on an all Ireland basis and including Northern Ireland.

5.62   There are already good examples of how joint government-industry public awareness campaigns can be successful, such as the France's *'Internet sans Crainte'* ('Internet without Fear ') or Ireland's makeITsecure campaign with its three key messages: Make it safe. Make it simple. Make it secure.[2] Within the UK, important lessons can be learnt from the from the the Cyberbullying Taskforce whose targeted website campaign with industry reached 6.5 million unique IP addresses and 98,000 users reaching the homepage for the campaign. The recent anti-bullying campaign on YouTube had over 65,000 views in just three days.[3] This illustrates how using the right medium along with unified support can generate much greater awareness of an issue.

Links to other public information and awareness campaigns

5.63   Children's internet safety is not an issue that can be treated in isolation, and has commonalities with a range of initiatives to do with children, safety and the internet. In developing its campaign the Council should look across other existing programmes to see where joint working could be strengthened and expanded. This would deliver a more coordinated approach to Government-sponsored campaigns, allow greater flexibility as priorities change, and provide possible efficiency savings. The objective would be to develop a seamless and comprehensive approach across a range of related public interest issues.

5.64   In particular, there are opportunities for joint activity with communications campaigns on cyberbullying, children's safety (under the Staying Safe: Action Plan) and wider internet security initiatives, such as Get Safe Online which is jointly sponsored by the Cabinet Office, Home Office, BERR and industry partners.

A 'one stop shop' for child internet safety information

5.65   A very broad range of organisations provide information to the public about child internet safety. Some key examples include:

- **ThinkUKnow.** An extensive education programme created by the Child Exploitation and Online Protection Centre (CEOP) and currently aimed at all school age groups from 11–16 years. Supported by DCSF and Becta (the Government's educational

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2   http://www.makeitsecure.org/en/index.html
3   http://www.youtube.com/beatbullying

technology agency), the programme provides advice and safety information on a range of technology issues, including gaming and cyberbullying. ThinkUKnow consists of education resource packs for teachers and others who work with children as well as an interactive website for children and young people: www.thinkuknow.co.uk. The programme has already been delivered to over 1 million children and young people since 2006, with plans to reach 3.5 million by 2009.

- **Know IT All.** A set of award winning resources developed by children's internet charity Childnet International containing advice on the safe and positive use of the internet. It has been developed with the support of the Training and Development Agency for Schools (TDA), Becta and Microsoft. Primarily in CD-ROM format, it contains information about positive ways young people can use new technologies, what the risks are, and practical advice in avoiding or minimising risks. There are four CDs in the series: Know IT All for: Parents, Teachers, Trainees and Volunteers. Free copies of Know IT All for Parents has been distributed to over 1 million families through schools. The resources are available online at www.childnet-int.org/kia/.

- **The DirectGov information network.** This is the Government's online network of sites for communicating with the public. Direct.gov.uk itself features material on e-safety for young people as does DirectGov Kids (for younger children) and need2know.co.uk. Information for parents on online safety is available from parentscentre.gov.uk. However, awareness of these sites as a source of e-safety information is still very low (they did not register in Ofcom's research on where parents go for information) nor were they highlighted in responses to the Call for Evidence.

- **Charter for Media Literacy.** The Media Literacy Task Force was founded by the UK Film Council, Channel 4, the BBC and the BFI to respond proactively to the provisions in the Communications Act to 'promote media literacy'. In 2005 it launched a Charter for Media Literacy which, among a number of requirements, commits signatories to offering opportunities for people to develop critical skills in analysing and assessing the media. Around 170 organisations across education, culture, and the media and communications industries have since signed.

- **Industry resources.** A huge range of companies from across the internet value chain produce their own resources as well as distributing resources from organisations like Childnet. ISPs, mobile phone networks and computer retailers routinely provide information in the form of leaflets and CD-ROMs when families purchase a new product or service. Content hosts such as social networking sites frequently provide pages giving safety information and sometimes even integrate this information so that users are shown a safety message when undertaking certain actions (e.g. entering personal information or uploading a picture).

5.66   Despite the huge amount of information about e-safety, 57% of parents still say they do not know where to go for information on how to help their child stay safe online (Ofcom, 2008). It seems that for the consumer, this overload of information can be intimidating and confusing. Parents are unable to decipher what is the right information or where to get it from, given the plethora of material available. As Naace (the professional association for those working in ICT in education) said in their response to the Call for Evidence:

"The sheer scale and diversity of this guidance material now risk creating problems for its key audiences. For example, many web pages with links to e-safety resources can appear bewilderingly long or be restricted to a seemingly random selection of what is available. There is a danger that those in need will not find their way quickly and easily to the most appropriate sources of information and advice."

5.67 This may help explain why 53% of all responses to the adult Call for Evidence were of the opinion that more should be done to teach people how to use the internet, to educate them about the risks, how to apply parental controls, and how to assess the reliability of a web page, even though so much information about these issues is already available.

5.68 A number of responses to the Call for Evidence called for the development and promotion of an easy to use and interactive internet 'one stop shop' of information on e-safety for parents, children, teachers and other children's services providers. Its purpose would be to provide a central portal to all high quality internet safety related activity and information, and to signpost users (children, parents, educators, practitioners) to the wide range of information and services provided by Council members.

5.69 I have been persuaded by the arguments of stakeholders who have stressed the difficulties of trying to produce a single comprehensive source of online safety information and the wastefulness of establishing a new brand to compete with those that already exist. I also agree that information on e-safety needs to be available in a broad range of places where people might go. Therefore, we should not seek to replace the wealth of valuable initiatives that already exist. Rather, the campaign would draw from and link to other resources. Nevertheless, I feel that there is a need for a single location to which public awareness messages can point: a starting point for members of the public who might otherwise be bewildered by the sheer number of different information sources that are out there. A 'one stop shop' would provide this.

5.70 The kind of information and services that this website could provide would include: links to other relevant material, including material about wider internet safety and security issues (eg. data security and computer viruses); FAQs, top tips and jargon busters; help and advice from experts; information about new developments on child internet safety; chat forums where users can share experiences; advice on the safety tools and software available – filters, labelling, family friendly ISPs, etc; information on what is age-appropriate content; and information about what do if you have a problem online.

5.71 As part of providing children and their parents with information about what to do if they have a problem online – which in most cases would be to complain to the provider of the product or service they are using, or for illegal activity, to CEOP or the IWF – the 'one stop shop' could also give users clear information about what their rights are, and how they can make a complaint. I strongly support companies' own complaints processes, some of which are excellent. However, we need to support the large number of people who currently do not know where to go if they have problem (see paragraphs 5.30–5.31). In this sense, the 'one stop shop' could support companies' own complaints processes by emphasising that in many circumstances the provider of the product or service a person is using is often the most useful port of call if they have a problem.

5.72 As I have said, I believe that the creation of a 'one stop shop' is not about replacing the resources that already exist, but rather about helping the public to navigate the range of information that is out there and get to the information the need. This is vital if we are to properly support those users who have decided to take action to protect themselves or their children but might still be put off by the confusing array of messages (see paragraphs 5.53–5.59).The site would need to direct different types of users (different age groups of children, parents and other relatives, those who work with children) to appropriate information presented in a way they would understand. A range of different partners should be involved in developing this site, but I believe that in order for the site to act as a neutral, authoritative first port of call, it should be a Government hosted website.

5.73 **I recommend that the Council work to develop an authoritative 'one stop shop' for child internet safety within the DirectGov information network, based on extensive research about what different groups of users want.**

Building on safer internet day

5.74 Coordination of the UK's involvement in Safer Internet Day is currently led by CEOP, as part of their extensive and successful education and harm-reduction programme, and the publicity on 12 February 2008 secured significant media coverage.[4] However, a coordinated event with multi-stakeholder activity has the potential to deliver far greater penetration. This would reflect some of the responses to the Call for Evidence on the need to build the social awareness campaign around existing strategies, and evidence about what works best in getting messages through to the public.

5.75 In order to maintain momentum and awareness around internet safety, I suggest that the Council work with CEOP to build on the success of Safer Internet Day and develop an annual E-safety week based on range or coordinated activities, workshops, events and launches.

5.76 An annual e-safety week would be a useful vehicle around which awareness could be reinvigorated and the opportunity to highlight new issues on a rolling annual cycle. It would not necessitate significant investment, but rely on the coordination of activity by Council members, which together would deliver a powerful media profile. The week could culminate in a significant annual conference attended by senior Ministers to celebrate the successes of the year and discuss the challenges ahead. This could be linked to the annual UK Child Internet Safety Summit hosted by the Prime Minister (see paragraph 3.135) to position the UK as leader on child internet safety.

5.77 I suggest that the campaign should be developed and coordinated so that there are seamless links into other related awareness campaigns such as child safety, cyberbullying or wider internet security and that, as a first step the Council undertake an audit of initiatives currently being undertaken in these areas.

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4 For example: http://news.bbc.co.uk/1/hi/technology/7239395.stm

Meeting the needs of disadvantaged and vulnerable groups

5.78   Some 71% of parents from lower socio economic groups do not currently use the internet (UK online/ICM, 2007). There are likely to be additional challenges in engaging these parents with messages around e-safety, given that they may not see the benefits of internet use, and may be lacking the skills and confidence to use the internet. In overseeing the delivery of the public information and awareness campaign, the Council's sub group on protecting vulnerable children and young people (see paragraph 4.38) should work with partners to ensure adequate provision is made to target this group, and build on initiatives that have the potential to reach out to parents in this group, such as UK online centres and extended schools (see below).

5.79   In addition, there are a range of children who may be particularly vulnerable to online risk due to their offline characteristics, including those with abusive or unstable home lives, those with low self-esteem and those experiencing mental health problems. As outlined earlier, we need enough protective mechanisms in place to support safe internet use and gaming by the majority alongside targeted approaches to helping the more vulnerable. Often these children may be hard to reach. However, it is imperative that in designing and delivering a public information and awareness campaign on e-safety, proper consideration is given to how to make sure that our messages reach these particularly vulnerable children and young people.

Sustainable education and children's services initiatives

5.80   One of the strongest messages from the Call for Evidence and other parts of my Review process was the role that schools and other services for children and families can play in equipping children and their parents to stay safe online. Schools and children's services have the potential to deliver e-safety support to all children, including those who do not receive it at home.

5.81   Some 68% of all responses to the Call for Evidence said that education was the best way to help families to manage the risks with the internet. As Childnet International's response to the Call for Evidence stated:

"Childnet believes that the key universal point of access in engaging with children, young people and their parents in managing the potential and actual risks of engaging with the internet is through schools."

5.82   Schools are an obvious means of accessing children and parents. They are a physical presence in almost every community – there are around 30,000 schools in the UK serving a school population of around 10 million pupils – and all children aged 5-16 are required to attend school. A recent survey stressed the role of schools in influencing parents, with 82% of parents from lower social economic groups saying that they trust information from schools in understanding the risks and benefits of the internet (UK online/ICM, 2007).

5.83   Schools current performance on e-safety appears to be mixed. Whilst the Review was informed about numerous examples of good practice, 51% of responses to the Call for Evidence said that schools could play a bigger role, and around a third of pupils aged 9-19 report having received no lessons at all on using the internet (Livingstone and Bober,

2005). This is despite £5bn of Government investment in educational technology since 1998.[5] It is difficult to develop a clear picture of the performance of schools on e-safety (see below). However, I believe there are a number of practical measures that can be implemented to improve schools' performance on e-safety. There are set out below. At a Government level, they would sit within the DCSF's Harnessing Technology Strategy.

5.84 This Review comes at an exciting time in the development of schools and children's services. Under the Every Child Matters agenda, schools are increasingly being encouraged to take a holistic view of the child, rather than only delivering educational outcomes. There is a real opportunity here for schools to embrace e-safety as part of their wider role in equipping children with the life skills they need to stay safe.

Every Child Matters

The Every Child Matters (ECM) agenda is the strategy for joining-up the delivery of public services so that they address the needs of the child as a whole and not just as a user of the service. All public services that work with children contribute towards ensuring that each child achieves the five outcomes: saying safe, being healthy, enjoying and achieving, achieving economic wellbeing and making a positive contribution.

The 'staying safe' outcome of ECM states that children and young people be:

- safe from maltreatment, neglect, violence and sexual exploitation;
- safe from accidental injury and death;
- safe from bullying and discrimination;
- safe from crime and anti-social behaviour in and out of school; and
- secure, stable and cared for.

Although these aims were probably written with the 'real world' in mind, many apply equally to the 'virtual world' that children and young people may encounter when using technology in its various forms. Indeed, for many young people the distinction between online and offline is blurred, and the online world is very much their reality – offering them unprecedented opportunities to communicate, create, discover, learn and be entertained in a virtual environment.

To ignore e-safety issues when implementing the ECM agenda would be a major oversight and would ultimately lead to significant gaps in child protection policies, leaving children and young people vulnerable.

5.85 Whilst schools have an important role to play, I am conscious of the tendency to charge schools with responsibility for tackling all of society's problems. It is important to remember that schools are only part of the solution. For example, although schools have the potential to build the resilience of children who do not receive e-safety support at home, some of the most vulnerable children – those who are persistent truants or have been excluded from

5 Kevin Brennan, Parliamentary Undersecretary of State for Children, Young People and Families. Speech to Becta Conference, 13 February 2008.

school – will have little contact with schools. Similarly, Ofcom found that only 6% of parents suggested they would ask a school for information about internet safety (Ofcom, 2008). So, although parents seem to trust schools, this does not mean that they necessarily go to schools for advice on e-safety.

5.86   We need to be realistic about what schools can deliver, and for this reason, I also propose a number of practical measures in relation other services for children and families.

Scotland, Wales and Northern Ireland

5.87   The Byron Review was asked to report to the UK Government. As such, the recommendations relating to education and children's services relate to the system in England, which the UK Government is responsible for. Different systems operate in Scotland, Wales and Northern Ireland, where responsibility for education and children's services is devolved to the Scottish Government, the Welsh Assembly Government and Northern Ireland Executive, respectively. **I recommend that the devolved administrations consider how these recommendations for sustainable education and children's services initiatives on e-safety could be applied to their respective systems.**

Setting out the e-safety challenge for schools

5.88   The clearest message to schools about what should be taught and what learning outcomes pupils should attain is the National Curriculum. This applies to pupils up to age 16 in all state schools in England. A number of responses to my Call for Evidence called for e-safety to be covered more explicitly or in different places throughout the curriculum.

5.89   Although schools have a great degree of autonomy in deciding how to deliver the curriculum I have found that the National Curriculum *does* contain explicit references to e-safety. Following consultation in 2007, the curriculum for secondary schools (teaching children aged 11-16) was revised to take greater account of e-safety. A similar review of the primary curriculum will be undertaken in 2008.

5.90   The revised secondary curriculum, which will be introduced from September 2008, includes extensive references to e-safety under the subject of Information and Communications Technology (ICT). These include the "key concept" of "recognising issues of risk, safety and responsibility surrounding the use of ICT" and the "key process" of communicating information "safely and responsibly". In addition, there are references to e-safety concepts in the essential skills, personal development obligations, and the cross curriculum dimensions of "Technology and the media" and "Creativity and critical thinking". The new curriculum is supported by a website www.qca.org.uk/curriculum, which contains information, guidance and case studies to assist schools.

5.91   A number of stakeholders who spoke with the Review raised the issue of whether schools should address e-safety as part of ICT or whether it might be better covered elsewhere. For example, children could learn about cyberbullying as part of personal, social, health and economic education or they could learn about critical evaluation of online sources as part of history or English. This is a valid suggestion. However, the curriculum does not prevent schools from delivering ICT, and thus e-safety education, as part of other subjects. In fact, some schools, particularly primary schools, integrate ICT into other subjects rather than teaching it in a separate lesson. Children's perceptions of online and offline worlds is

frequently blurred. They do not see the internet in a box on its own, and so neither should schools. I believe that schools should be supported to embed e-safety across their activities. However, I do not believe that putting additional requirements into the curriculum is the answer.

5.92 For these reasons, I do not recommend wholesale changes to the recently revised secondary curriculum which included strengthening the safety aspects within the ICT curriculum. E-safety and media literacy should be embedded across teaching and learning, not 'bolted on'. **I recommend that the Government ensures that e-safety best practice is well reflected in guidance and exemplar case studies across the curriculum as part of the support being provided to help schools to implement the new curriculum.**

5.93 **I also recommend that the independent review of the primary curriculum being led by Sir Jim Rose should take full account of e-safety issues.**

Building the capacity of schools to deliver on e-safety

5.94 In order to meet the e-safety challenge, schools need the right school-level approaches and a workforce with the right skills to deliver.

5.95 Teachers and other school staff need to be equipped, not only to integrate new technology within the classroom, but to do so safely, in a way that empowers children to manage the risks. A number of responses to my Call for Evidence suggested that there are gaps in the capacity of the school workforce to educate children about online safety. It seems that the generational digital divide that causes many parents not to engage with children on issues of e-safety may also affect the adults who work in schools.

5.96 Recent research suggests that levels of training on e-safety are low. Research carried out by Childnet International, which involved interviewing 400 teacher trainees at four different initial training institutions, showed that currently online safety is not being covered within the teacher training curriculum. Yet overwhelmingly, both students and tutors alike thought that this was an issue which ought to be covered (Childnet, 2007). Separate research from Becta found that relatively low proportions of teachers had received training around e-safety (Barrow, 2006).

5.97 The Training and Development Agency for Schools (TDA) is the Government agency that works with schools to develop their workforce. Given that the importance of e-safety has now been reflected in the curriculum, the TDA has a critical role in ensuring that e-safety is addressed in workforce standards for initial and continuing training and development.

5.98 TDA has begun to take account of this, working with Childnet to produce the KnowITall training packs for trainee and existing teachers on e-safety. However, given that the evidence shows that e-safety is covered relatively poorly, at least outside ICT lessons (Barrow, 2006), more can be done to ensure that school workforce training provision remains relevant to the modern school environment. Therefore I believe that DCSF should work with the TDA raise awareness of, use of and feedback on the recently published 'Know IT All' training packs for new and existing teachers that have been produced by Childnet.

New teachers

5.99 To achieve qualified teacher status, all trainee teachers must pass a basic ICT skills test. However, as younger, digitally literate teachers join the workforce, the need for basic ICT skills training has declined. This has made the test largely irrelevant, and some have suggested that it be scrapped.

5.100 However, issues relating to e-safety and the internet will become increasingly important as new technologies play an ever greater role in the classroom. There remains a need to ensure that new teachers demonstrate a minimum awareness of ICT that is fit for purpose and addresses knowledge and understanding of e-safety as well as skills. Therefore **I recommend that the TDA include e-safety elements in a revision of the statutory ICT test.** However, the purpose of revising the test is not to limit new teacher's access into the profession, and I recognise the needs that new mature-age teachers will have to meet these requirements. In order to maximise the number of new teachers that enter the profession with the appropriate e-safety training, **I recommend that guidance for initial teacher training providers on how to assess trainees against the Professional Standards for Teachers should take account of e-safety competency.**

5.101 As these changes are implemented, it will be important to assess their effectiveness and relevance to the needs of children. New teachers will play a key role in bridging the generational digital divide, and driving the future direction on e-safety education. They may well be the most advanced staff in their school when it comes to using new technology, and so I believe they should be supported to disseminate e-safety knowledge to their colleagues.

5.102 **I recommend that TDA's survey of new teachers should include elements on e-safety**, as a way of assessing the capacity of teachers that are entering the profession to support children to stay safe online.

Existing teachers and school workforce

5.103 It is also important to ensure that existing teachers are equipped with basic training and skills in this area. Not least, because teachers sometimes face the same issues around the downsides of new technology as their pupils, such as having untrue, unfair or offensive comments made about them on websites.

5.104 In good schools all staff will have a role with regard to e-safety, whether that be a teaching assistant or classroom teacher in a supervisory/awareness role, the ICT coordinator as the e-safety coordinator, or school leaders who will have an awareness of the need for e-safety at a strategic level. Yet the evidence suggests that e-safety training remains concentrated in ICT Co-ordinators (Barrow, 2006).

5.105 In the context of helping children to stay safe under Every Child Matters, **I recommend that the Government takes this opportunity to encourage school leaders and teachers to focus on e-safety by identifying it as a national priority for the continuous professional development (CPD) of teachers and the wider school workforce.** I also suggest that any guidance on the Professional and Occupational Standards for school support staff and their managers should emphasise the need for e-safety to be included as part of their continuous professional development.

5.106 Decisions about CPD of staff rest with schools themselves. However, a thorough reflection of e-safety in the CPD for a school's workforce should provide a valuable indicator to Ofsted when they inspect a school's performance on e-safety.

Improving performance on e-safety at the whole school level

5.107 Schools take a range of different approaches to e-safety. Some deliver e-safety weeks and involve parents and some embed it into their existing curriculum as discrete units; some have staff who are trailblazers in the integration of technology into the classroom; some draw on parents or governors who have expertise in this area. Most schools use the educational resources that already exist, such as those produced by CEOP, Childnet International, and Becta. However, the Review is aware that, overall, schools approach to e-safety and related support is neither coherent, comprehensive, nor consistent.

5.108 Taking an effective approach to e-safety should not be made an onerous task for schools. However, whether or not children receive the support they need to stay safe online should not depend on being in a school where the management is especially enthusiastic about technology. All school leaders should play a role in making sure that e-safety is mainstreamed throughout the school's teaching, learning and other practices. Strategic planning on e-safety is essential to ensure that schools meet their responsibilities under Every Child Matters and their duty of care to children.

5.109 As previously identified in this Report, good schools ensure that all staff play a role, supported by school management who understand the need to cascade an e-safety strategy through the school's activity. But school management teams themselves need the appropriate support to ensure e-safety is given the necessary priority.

5.110 Becta provides a self review framework which helps schools deploy their ICT resources to best effect. E-safety is reflected across several elements of the framework and Becta also provides guidance on how schools can provide evidence to Ofsted about their performance on e-safety (see discussion on the role of Ofsted below). I believe that this is a useful resource, which all schools should be encouraged to use on a regular basis, and that Becta continues to review and refresh its Self Review Framework ensuring inclusion of e-safety across the various elements.

> **Becta**
>
> Becta is the Government's agency for Information and Communications Technology (ICT) in education, leading the national drive to inspire the effective and innovative use of technology throughout learning. They provide expert support to a range of e-safety initiatives such as management of the HSTF's Education sub group; working with CEOP to develop the ThinkUKnow 8-11 year old education programme; and the development of a toolkit for Local Safeguarding Children Boards (LSCBs) to help them to plan, develop and implement their e-safety plans to ensure the online safety of all children.

5.111   Most schools have acceptable use policies (AUPs) as a means of guiding children to use the internet safely and responsibly. Research from Becta found that 80% of primary schools and 90% of secondary schools had an AUP for pupils (Kitchen, Finch and Sinclair, 2007). However, while teachers report that AUPs allow them to deal with breaches of e-safety, there are indications that AUPs require regular refreshment to take account of the rapid advances of new technologies and children's applications (Barrow, 2006) – for example, whether and how it is appropriate to use social networking sites in school. They also need to promote positive use of technology, rather than just spelling out a list of 'don'ts'.

5.112   As well as support mechanisms, complementary structures to measure compliance and performance will also be necessary. I suggest that Becta considers providing Local Authorities with statistical evidence on schools engagement with Becta's Self Review Framework, not to duplicate the role of Ofsted, but to enable LAs to focus their challenge and support.

5.113   The challenge of ensuring our schools are safe and that school leaders are able to respond will continue to evolve as technology changes. Becta will continue to play a critical in proving the expert support schools require.

5.114   **I recommend that in all schools action is taken at a whole-school level to ensure that e-safety is mainstreamed throughout the school's teaching, learning and other practices. In particular I recommend that:**

- **Government should encourage schools to use Becta's self review framework to drive continual improvement in schools' use of ICT including with regard to e-safety.**

- **100% of schools should have AUPs that are regularly reviewed, monitored and agreed with parents and students. Guidance on this should be incorporated in Becta's revised self review framework.**

5.115   Where schools are demonstrating best practice on e-safety I believe it would be helpful to recognise this, perhaps through awards for schools demonstrating outstanding practice in this area.

Extended schools

5.116   Increasingly, what is taught in the classroom does not represent the totality of schools' offer to pupils and their families. The Government has set out its ambition for every school to become an extended school, working with the local authority and local providers, to provide access to a range of integrated services including community access to facilities for adult and family learning and ICT. These activities are made available outside of normal school hours and during holidays. There are currently 9000 schools providing full extended services with the aim for all schools to be doing so by 2010. This is being supported by £1.3 billion in Government funding, weighted towards disadvantaged areas.

5.117   I see extended schools as a great opportunity through which to deliver e-safety messages and support to parents. The familiarity and regular contact with the child's school provides a safe and more comfortable environment to engage adults less confident about new technology. Extended schools may also contribute to wider benefits for children, adults and families, in terms of improving performance, self confidence, raising aspirations and attitudes to learning.

5.118 **I recommend that Becta work with TDA and their partners to encourage and support schools to offer family learning courses in ICT, media literacy and e-safety so that parents and children can together gain a better understanding of these issues. TDA should take opportunities to collect and disseminate case studies on e-safety for extended activities.** I also suggest that Becta work with TDA to make sure that after school ICT clubs and activities provide good coverage of the e-safety elements of the curriculum.

5.119 **I recommend that UK online centres should work with the extended schools to expand the provision of services and training for parents to achieve basic media literacy.**

5.120 Ofsted inspect a school's extended offer as part of their inspection regime. Efforts to address e-safety through the extended offer would contribute to a school's general performance on e-safety as assessed by Ofsted.

Inspecting schools' performance and gathering the evidence to inform future policy

5.121 In order to make a better assessment about what further changes need to be made to the education system we need to gather better evidence on the delivery and performance of e-safety. From the limited evidence the Review was able to collect, it would appear that while there are structures and systems in place to educate children and young people about e-safety, there has been no formal mechanism for understanding the extent of the problem or the impact of the solutions.

5.122 Ofsted (the Office for Standards in Education, Children's Services and Skills), is the official body for inspecting and evaluating schools and the quality of their education. It is their role to ensure that schools deliver what is expected in the wider school curriculum. Ofsted carries out hundreds of inspections and regulatory visits each week which makes it an incredibly powerful agency in ensuring that standards of education are maintained across schools in England.

5.123 As part of the regime for ensuring consistent standards, all schools are asked to maintain an online self evaluation form (SEF) in which they assess their general performance. Inspectors use the SEF along with evidence gathered during the inspection in judging the school's effectiveness. In September 2007, the SEF was revised to include a new question asking schools about "the extent to which learners adopt safe and responsible practices in using new technologies, including the internet". Inspections will now take this into account when arriving at the overall judgement for 'staying safe'. This indicates a definite shift in priority which I firmly welcome and endorse.

5.124 This change provides a good basis for future reporting from Ofsted about schools performance on e-safety. Although inspections have already begun under the revised SEF, no data on school performance has yet been published. Ofsted also conducts regular surveys, studies and reports on detailed and wide ranging aspects the education system to inform continuous change and improvement. This gives Ofsted the capacity to identify shortcomings in the education system in relation to e-safety and set out an influential case for change.

5.125 **I recommend that Ofsted take steps to hold schools to account and provide Government with a detailed picture of schools performance on e-safety. In particular I recommend that:**

- **Ofsted provide the Government with a 'snap-shot' report on school responses to question 4b of the SEF (regarding e-safety) by summer 2008.**

- **Ofsted should comment on the state of internet safety training in schools as part of its forthcoming long report on ICT due for publication in 2008.**

- **Ofsted uses its annual ICT school surveys to evaluate the extent to which schools teach learners to adopt safe and responsible practices in using new technology.**

5.126 In addition, and to reflect the desirability of covering e-safety and media literacy across are range of lessons and activities, beyond ICT, **I recommend that Ofsted undertake a thematic study on the teaching of e-safety and media literacy across what schools offer.**

5.127 Whilst many stakeholders have welcomed the inclusion of an e-safety question in the SEF, some have stressed the need for Ofsted inspectors to challenge schools on their performance in this area.

"Naace is pleased that [the SEF] includes a reference to learners adopting "safe and responsible practices in using new technologies, including the Internet". It is important that inspectors rigorously test this element of self-evaluation in their visits to schools, and Ofsted should brief their teams accordingly, ensuring that they have sufficient knowledge of ICT to make a secure judgement."

(Naace, response to the Call for Evidence)

5.128 An Ofsted long report on ICT is due in 2011. If at that time, the evidence indicates widespread concerns in relation to school delivery of e-safety or that Ofsted inspectors are not frequently commenting on the state e-safety in schools, **I recommend that Ofsted consider an assessment on performance in regard to e-safety in all school inspection reports.**

Other services for children and families

5.129 In addition to the vital role of schools in improving the skills of children and parents around e-safety, there are a number of other agencies that have a part to play.

Local safeguarding children boards

5.130 Every local authority has now established a local safeguarding children board (LSCB) as the key statutory forum for agreeing how the relevant organisations in each local area will co-operate to safeguard and promote the welfare of children, and for ensuring the effectiveness of what they do. *Working Together to Safeguard Children* (HM Government, 2006) further defines the ongoing role of LSCBs as follows:

"3.3 The work of LSCBs is part of the wider context of children's trust arrangements that aim to improve the overall wellbeing (ie the five Every Child Matters outcomes) of all children in the local area.

3.4 While the work of LSCBs contributes to the wider goals of improving the wellbeing of all children, it has a particular focus on aspects of the 'staying safe' outcome."

5.131 To assist LSCBs in the development of an e-safety strategy, Becta has developed an LSCB toolkit. The toolkit aims to drive the e-safety agenda forward for LSCBs, offering a framework for a national standard of best practice that can be adopted and adapted locally to meet local safeguarding needs and conditions. More specifically the 'PIES' approach advocates a model for ensuring effective policies and procedures, a safe and secure infrastructure and good education and training for all, all underpinned by robust standards and frameworks.

P – Policies and procedures

I – Safe and secure infrastructure

E – Education and training

S – Standards
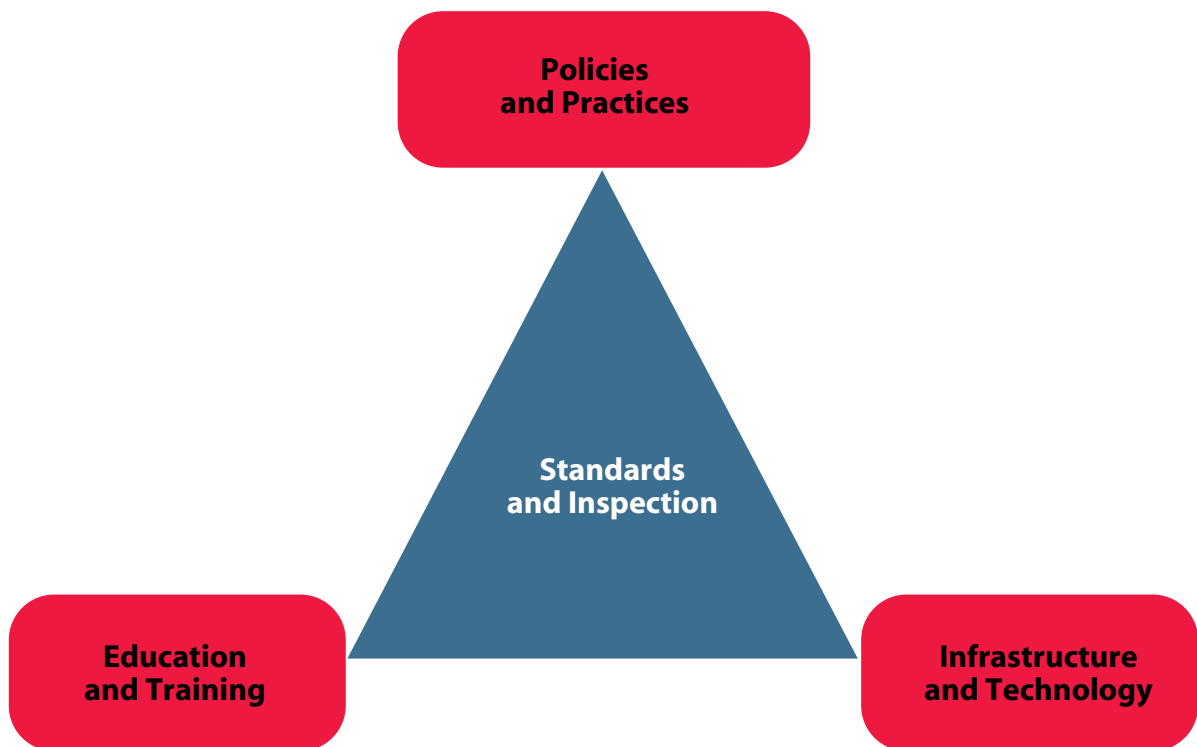
(Source: Becta)

5.132 Responses to the Call for Evidence suggest that whilst many LSCBs show room for improvement around e-safety, LSCBs do take this issue seriously. According to Becta there are significant numbers of LSCBs who have developed an e-safety strategy or who are in the phase of development. To support further development in this area, **I recommend that work to implement the Staying Safe Action Plan promotes Becta's LSCB toolkit** to ensure that e-safety is embedded across the services represented on LSCBs.

Staying Safe: Action Plan

In response to a major consultation launched by Ed Balls, the Secretary of State for Children, Schools and Families in July 2007, the cross-Government Staying Safe: Action Plan was launched in February 2008. The Action Plan sets out work which will be taken forward between 2008 and 2011 to improve children and young people's safety. Staying Safe recognises that children and young people cannot achieve or thrive unless they are safe – but also that it is important to help parents to strike the right balance between protecting their children but also giving them the opportunity to explore and experience new activities.

The programme of work set out in the Staying Safe Action Plan will drive delivery of the new Public Service Agreement (PSA) to improve children and young people's safety. The PSA is underpinned by 4 indicators, on bullying, initial assessments by children's social care, hospital admissions caused by unintentional and deliberate injuries and preventable child deaths. To monitor and drive delivery of the PSA, a cross-Departmental PSA Board has been established, reporting to the Cabinet Sub-Committee responsible for children's policy.

The Staying Safe consultation generated over 1000 written responses, as well as events up and down the country to discuss the issues. Internet safety was raised by children and young people, parents and practitioners as a significant issue. Many parents said they would welcome more information on internet safety and assistance from the internet industry in keeping their children safe online.

'My mum doesn't know anything about computers...maybe she should, it might make her feel better about when I go on the internet' (Young Person)

'Adults need specific guidance and training to know what to look for as often children are the ones with time to explore the computer.' (Charity)

The wider children's workforce

5.133   In addition to the school workforce a whole range of adults interact with children including youth workers, childcare workers, staff in Sure Start Children's Centres, social workers, health professionals and people running activities as part of extended schools. As interaction with the internet becomes more and more embedded in children's lives in a greater variety of contexts, it is increasingly important that these adults have the knowledge, skills and understanding to help children stay safe online.

5.134   The recently published Children's Plan (Department for Children, Schools and Families, 2007) set out the government's vision for a children's workforce which operates across professional boundaries in multi-disciplinary teams, with career pathways across different sectors, strengthening protection for vulnerable children and young people. **I recommend that the Government's forthcoming Children's Workforce Action Plan includes measures to ensure that people who work with children and young people have appropriate understanding of e-safety and how children and young people can be supported and protected online.**

5.135 For those adults who work with particularly vulnerable children, we need to ensure they are familiar with the broad spectrum of online risks facing children, and how to address them. **I recommend that the Joint Chief Inspectors' Review of Safeguarding should provide a comprehensive assessment of children's internet safety across all children's services in its 2010 report to Government.**

5.136 In line with the joint working approach I have set out for child internet safety, industry has a potentially valuable role to play in supporting services for children around e-safety. **I recommend that DCSF, DIUS, and their agencies, explore the opportunities for industry to contribute expertise and resources to ICT education for children and parents across children's services.**

Supporting parents and the home environment

5.137 While the extensive network of agencies that engage with children can play a key role in e-safety, parenting and the home environment remain paramount. Any comprehensive package of reform to minimise risk to children from the internet must help parents – who are in the best position to know and understand the individual differences between their children – develop their skills around e-safety. Work to develop support mechanisms for informing and engaging parents in line with the Children's Plan should incorporate e-safety.

5.138 The overwhelming majority of responses to the Call for Evidence (81%) believed that managing the potential or actual risks of going online was ultimately a parental responsibility, yet 55% said that a large number of parents knew very little about the potential or actual risks of using the internet and how to manage them. This was supported by focus group research conducted for the Review which offered two clear messages. The first was that most parents felt overwhelmed by the scale of the internet and that their monitoring and safeguarding strategies were inadequate:

"The thing is that technology moves ahead so quickly…They are 10 years old, but they are one step ahead of you."

(Parent, London)

5.139 The second was that where measures were in place, there was a reliance on more basic, ad hoc methods, such as screen time and often only after a particular incident has occurred.

"I use an egg timer."

(Mum of year 3-6, Leicester)

*"My daughter, we had a lot of trouble with MSN and doing a lot of inappropriate messages with her friends – we couldn't understand half of it. The language, too much F*** this, and so we banned her for a year."*

(Parent, London)

5.140 This suggests that there is a need to put in place a range of policies and initiatives to increase the quality, availability and delivery of parenting support and family support regarding e-safety. In particular, this support should target measures that raise parent's e-skills and confidence to allow parents to protect their children effectively themselves.

Therefore, I recommend that the National Academy of Parenting Practitioners creates a parent training module on e-safety, and includes elements on e-safety in existing courses on managing child behaviour.

5.141 The Children's Plan also commits the Government to providing two parenting experts in every local authority. **I recommend that adequate provision is made to train all parenting experts on e-safety.**

5.142 I also believe that that there is a significant opportunity to build all adults' capacity to better manage online safety through the wider skills agenda. In July 2007, the Government published *World Class Skills* (HM Government, 2007), which identifies ICT as an essential skill for the modern workforce. While this forms part of a much wider social and economic agenda, I urge the Government to work with its partners, further education and training providers, employers and learners to ensure that e-safety is given adequate provision in its drive to establish a more digitally literate workforce.
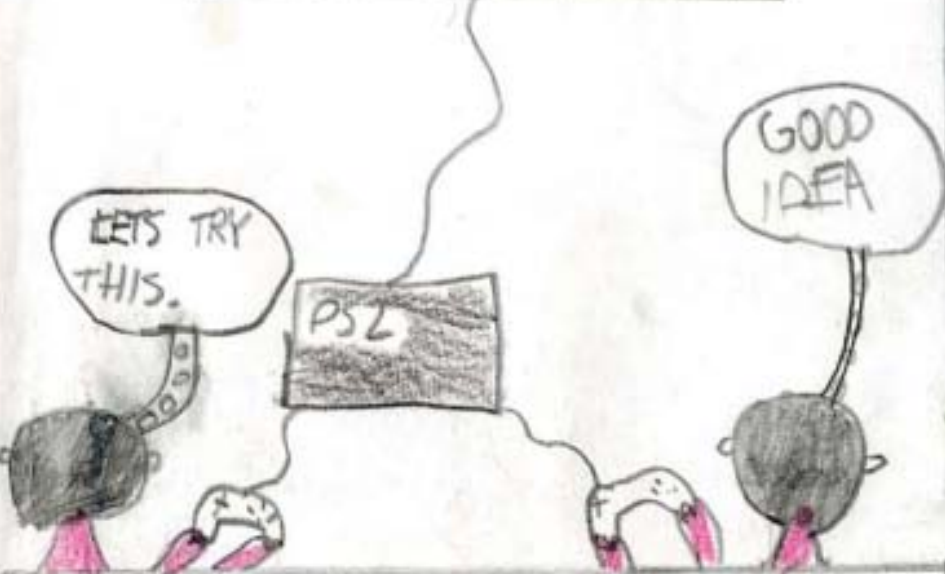
Competition runner-up: Craig Mackay, age 10
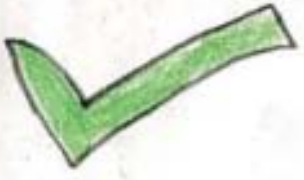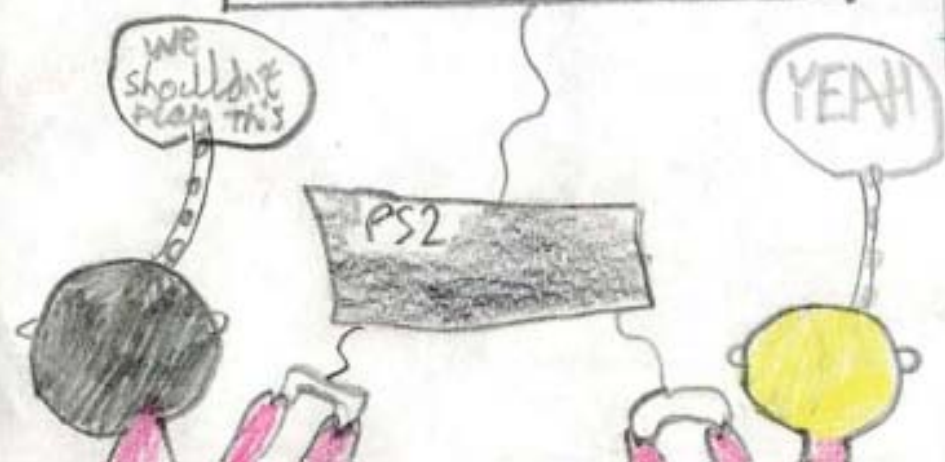
Chapter 6

Video Games: The Evidence

Introduction

6.1   The Prime Minister also asked me to look at risks to children's safety and wellbeing of exposure to potentially harmful or inappropriate material in video games, and assess whether current mechanisms to help protect children and young people are effective and sufficient.

6.2   The 'video games' landscape covers a broad spectrum of products, played on different platforms with varying content. They range from very simple puzzle games on mobile phones and the internet and games designed to address a specific educational or training objectives, to vast, open-ended, virtual worlds. Some will contain adult material and are not aimed at the child market, but many more are family-orientated.

6.3   In taking my recommendations forward, we should be aiming to ensure that children and young people play video games that are age-appropriate and that they encounter risks that are minimal and possible to manage, or find support to manage. Parents should feel supported to assess confidently and realistically the levels of risks in games for children and young people without restricting their access to and enjoyment of age-appropriate games. The voice of better informed parents should then drive industry investment and continued innovation around child safety in video games.

Setting the scene

The market

6.4   The global video games sector is a major media industry, with the best-selling video games having similar earning potential as the biggest films, and our games industry is one of the UK's success stories. The UK continues to be the largest market in Europe – employing around 22,000 people, with video games representing around 30% of all screen based media exports in the UK. It is also the fourth largest developer of video games in the world in terms of revenue generated (ELSPA ScreenDigest, 2004 and Games Investor, 2007).

Who plays video games?

6.5   More people than ever before are playing video games, and within Europe, UK consumers buy the largest numbers of games (ELSPA ScreenDigest, 2004). Video games are being marketed towards an increasingly broad demographic – 59% of UK 6-65 year olds (26.5 million people) play electronic games, 21.6 million play at least once a week.

And, whilst the average UK gamer is in their late twenties, virtually all children and young people play video games (BBC, 2005).

How are they played?

6.6   In the UK, the vast majority of games are accessed through games consoles (including portable console) or PC discs, with children mainly playing by themselves, and to a lesser extent with friends and family. A significant minority of children and young people are playing games online, and a small percentage access games on mobile phones (Microsoft/ StrategyOne 2007). However, there is significant projected growth in both the online and mobile markets. Around two thirds of 5-16 year olds have their own games console, whilst 87% have a console at home. Boys are much more likely than girls to own their own games console (79% compared to 50%) (Childwise, 2008).

What do they play?

6.7   The term 'video games' covers a wide variety of products with varying content, narrative and style, available in today's market. Some contain adult material and violence and are not aimed at the child market, but many more are family orientated. In fact, most games sold in the UK are appropriate for children under seven, and the top selling titles are often in the lower age ratings. Only a small percentage of games (around 5%) are given a certificate of 18+, which represents between 6-8% of sales (Entertainment Retailers Association).

Percentage of Sales – Broken down by age rating
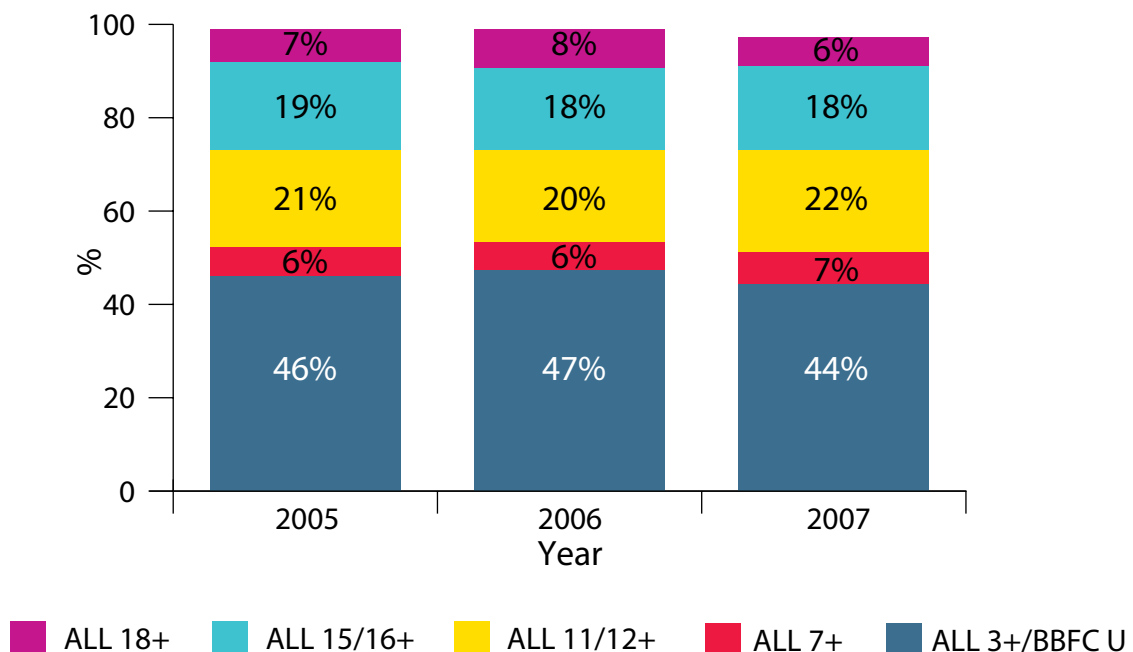
Based on information provided by the Entertainment Retailers Association – figures do not add to 100%.

The views of children and young people

6.8 In responses to my Call for Evidence and my focus groups, children, young people and their parents were largely positive and relaxed about gaming, perceiving many benefits from fun and relaxation through to skills development. Younger children say they enjoy educational games and see real pluses for their progress at school. Some also feel that gaming has social benefits.

6.9 In my focus groups a changing pattern of gaming use emerges as children grow up. Amongst younger children most gaming is through consoles, primarily for fun but with some 'brain training' games also being played. In secondary school, gaming increases, especially amongst boys and the use of online games grows, peaking at around age 15. This is the time when parental anxiety about the amount of time spent playing and the content of some games also peaks. It is common for children and young people to say they have played some of the most well known 18-rated titles. In the later teenage years gaming declines except amongst those young people who have become gaming 'enthusiasts' and who are particularly interested in adult video games.

6.10 Screen time and addictive behaviours are raised by both children and parents as potential risks:

"My little brother, you cannot take his [console] from his hands a lot of the time, he will find it difficult to go to sleep because he's away from it."

(15 year old girl, London)

6.11 Parents also lament the loss of family and other social interaction because of excessive screen time, although these concerns are declining for some with the advent of new gaming consoles which can be used by all the family.

6.12 As with the internet, older siblings often raise concerns about what their brothers or sisters want to play and whether it is suitable for them. This is particularly the case with younger brothers who are perceived as not being able to distinguish between the virtual and the real.

"It is a big issue the violence link. It becomes a habit playing these virtual games. It's not going to be long before it bleeds into real life. My brother wants [an 18 rated game]. I've been trying to explain to my Mum what it's like. Why would you want to bring this sort of stuff into your home?"

(16 year old girl, Cardiff)

6.13 Some parents express concern about levels of violence, saying that it might make violent behaviour seem more acceptable. Others are less concerned about this. But concerned parents also say that they don't always restrict access – sometimes giving into pressure for a 'peaceful life' or because it is 'only a game' or their children would get access in other ways anyway. However, it is clear from the focus groups that some parents are unaware of the content of some games their children are playing.

6.14 There are mixed findings on awareness and understanding of the different age rating and information systems. Some parents say they are willing to buy 12+ rated games for 7-10 year olds but then feel under pressure to buy 18-rated games when their children get older.

6.15 Overall parents feel that deciding what games are appropriate has to be their decision because it depends on their child, but that they would welcome clearer and more specific guidance explaining the rationale for the age ratings. In particular, some parents assume that the ratings would be too conservative and hence ignore them. There is a desire for more granularity so that they can decide what to allow on a case by case basis:

"You see it as a kind of general [guide], but you look at your child as an individual and there are some children that you think no way. And there are those that you think are responsible enough."

(Parent, London)

> **The importance of individual difference in children**
>
> David is 9 years old and the middle child. He comes across as a typical boy – active, a thrill seeker, displaying exuberant innocence. He loves playing violent games and shows addictive patterns of play that concern his parents. His Dad feels his son's particular personality type is more at risk on the internet because he is oblivious to the risks. He is experimental, confident and sometimes ignores his parents' rules. The elder son, Terry is the opposite. He is sensible, cautious, risk averse, compliant and his parents are less concerned about his usage of games and the internet.
>
> (Names have been changed.)

Online gaming

6.16 Parents are less worried about offline gaming than they are about gaming on the internet, although the potential benefits of online gaming are recognised:

"I quite like my son playing this game. It connects him with friends from different villages. There's lots of camaraderie between them."

(Mum of pre-teens, rural community, Leicestershire)

6.17 Nevertheless, there is clearly a high level of confusion about how online gaming works and the implications for children's safety. There was no awareness in my focus groups of parental controls on game consoles and mixed views on how useful they would be.

6.18 When it comes to online gaming many parents feel the same sense of inefficacy as they do about the internet generally. They feel uncomfortable with the idea of online games where their children might be interacting with strangers. Some also express concern about children's behaviour in online games and what they might learn from others:

"I think it's awful. I would not let my son go on these games. It's horrifying what they think is OK. They can behave in a completely different totally unacceptable way. They think it's OK because it's virtual but I'm not so sure. It can't be good to go around being so aggressive."

(Mum of pre teen, rural community)

6.19   Some parents are more relaxed about what children might experience in online games because they were essentially seen as being 'safe at home'.

Findings from the academic literature: violent content

6.20   The most persistent and controversial question concerning video games and children is the question of violent content and it's potential influence on aggressive behaviour. This has been a subject of public debate over recent years and has been reviewed on various occasions both by Government and industry (Goldstein, 2001: Boyle and Hibberd, 2005, Interactive Software Federation of Europe (ISFE) conferences[1]). The research remains highly controversial and inconclusive.

The Great Debate

6.21   The polarisation of research paradigms (see discussion in Chapter 1 regarding methodologies and interpretation of evidence) is evident in the field of video games. This distinction between the two camps has been labelled by Egenfeldt-Nielson and Smith (2004) as:

- The **Active Media perspective** where researchers seek evidence of direct harmful effects using laboratory experiments and surveys. One of the largest groups to use this approach in the context of video games is based in the United States and led by Professor Craig Anderson whose research is reviewed below.

- The **Active User perspective** which is social scientific in orientation and argues that reactions to media content are context-dependent. Research from this tradition does not directly ask about questions of effect but seeks to understand player's interpretations and response to technology and the influence of wider social and cultural factors on this (e.g. see work by Buckingham e.g. 2006).

6.22   Psychologists based in the UK (and all of those we consulted with for this review) tend to subscribe to the Active Users view and question the validity of the Active Media perspective research evidence of the harmful effects of video games in real world terms, given that the studies are laboratory based. Psychologists from the United States argue much more strongly that the there is evidence that playing violent video games increases aggressive and antisocial behaviour among children and adolescents (Anderson, Gentile and Buckley, 2007; Comstock and Scharrer, 2007).

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1 More information on ISFE conferences can be found at http://www.isfe-eu.org

The Active Media perspective

Some laboratory based research shows short-term increases in aggression after playing violent video games

6.23 Using an experimental laboratory-based design, the researchers compared the effects of playing a violent and a non-violent game (for less than an hour) on two groups of college students. Effects on 'aggression' were measured immediately after play, including: behaviour, attitudes, choice of words or amount of 'punishment' given to opponents (measured by a noise blast).

6.24 This kind of experimental approach has identified short-term effects of playing violent video games (i.e. within a few hours of playing) on young people's behaviour and attitudes. The group who have played more violent video games score higher on these measures of aggressive behaviour (in a play situation), they tend to choose more aggressive words, have more violent attitudes and give higher levels of 'punishment' immediately afterwards compared to the group who played non-violent games (Irwin and Gross, 1995; Anderson and Dill, 2000: Carnegey and Anderson, 2005; Anderson, Gentile and Buckley 2007). Moreover, one study showed a greater effect for men than women, suggesting gender differences (Bartholow and Anderson, 2002). A decrease in pro-social behaviour has also been shown following the playing of violent video games (Anderson and Bushman, 2001). Much of this work has been on college students but recent research has included children and demonstrated similar effects in young children (9–12 year olds; Anderson, Gentile and Buckley, 2007).

6.25 However, this set of research findings has been objected to by many other academics, some quite vehemently, and a number of review papers have been published in recent years that question its validity (eg. Goldstein, 2001; Boyle and Hibberd, 2005; Egenfeldt-Nielsen and Smith, 2004; Griffiths, 1999; Bensley and van Eenwyk, 2001; Amici Curaie, 2001). The serious objection is that the researchers extrapolate meaning beyond the data and make statements about causes of aggression in the real world from a set of data which is not ecologically valid – because behaviour is seen in a laboratory and therefore we cannot extrapolate with certainty to the 'real world' in which games are actually played. The other criticisms are that they only show short-term effects (and cannot say whether there are any long-term effects) and their dependent and independent variables are only quasi-valid (for example, see Goldstein 2001 who questions the validity of whether participants are truly 'playing' the games, whether the screen violence is a valid representation of 'violence' and whether aggression has truly been measured in these experiments).

There is also some evidence of a correlation between playing violent video games and aggressive behaviour/personality in the real world, but this does not prove that one causes the other

6.26 A second set of data looking for a relationship between violent video game playing and behaviour has used surveys – self or other report questionnaires – to see if there is an association between the two in the real world. Using this paradigm, there has been a reasonably consistent but relatively small correlation found between patterns of playing violent video games and aggressive behaviour or personality variables such as hostility or tendency to get into fights (e.g. Anderson and Dill, 2000; Gentile, Lynch, Linder and Walsh, 2004; Arriaga et al, 2006). Survey data is clearly more ecologically valid than laboratory

studies and it enables an estimate of how often the two things occur together but it cannot distinguish whether:

- playing the video games *causes* the aggression

- more aggressive children choose to play more violent video games, or

- there is another variable that could explain both violent video game playing and aggressive tendencies.

The General Aggression Model

6.27   There have been further experiments to try to identify the mechanism (emotional, cognitive or behavioural) that could explain the correlation between violent video game playing and behaviour/personality using the General Aggression Model (Anderson and Bushman, 2001; Anderson and Huesmann, 2003; Anderson, Gentile and Buckley, 2007). Here it is proposed that aggressive patterns of thoughts, emotions and behaviour become over-learned and reinforced over time and in the long term influence the individual's personality. However, the evidence for such long term effects is lacking and the model is seen by many as highly speculative.

The Active Users Perspective

6.28   Academics from the Active Users Perspective offer valid criticisms of the above research but provide little by way of contrary evidence. Research within this tradition relies on ethnographic methodology[2] to look at how children use video games and their meanings in children's lives. This approach does not directly address the question of direct media 'effects', as they believe the issue of violence (or indeed, any potential 'effect' of the media) needs to be seen in a broader context.

Context and what the child brings are what really matters

6.29   The majority of academics in the field of media research in the UK and Europe are proponents of the cultural/media studies approach and would argue that it is not possible to ascertain the effect of violent video games (or any other media) with a simple analysis of the content of a game and an individual. From this perspective the relationship between the video game and the child requires a 'contextual' approach that would situate the use of media in relation to other social and cultural factors (child's background and the context of the technological interaction) and see children not as victims of media influence but as active interpreters of content. This suggests that meaning involves interpretation and that different people perceive different things to be 'violent', not least as a result of their different experiences of violence in real life (Barker, 2001). Studies which have looked at how children understand violence in a video game found that they saw the violence as the means by which they got to another level in the game and did not relate it to their understanding of violence in real-life experience (Cragg, Taylor and Toombs, 2007). This was a small study but it highlights the dangers of making assumptions about how actions played through a game relate to the same action in real life. Within this view, what the child brings to the interaction, in terms of their interpretation and experience, is much more likely to be the key determining factor in revealing the 'effect' of the content on them.

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2 A holistic research method using fieldwork to describe human social phenomena, both qualitatively and quantitatively

6.30 Some small scale studies have been done that try to take into account some of these factors. For example, Kassis (2007) found a link between violent computer games and real violence only in adolescent boys with a history of violent socialisation; Olson, Kutner and Warner (2008) explored children's perceptions of violent interactive games and found that boys use games to experience fantasies (which they distinguish from reality) such as fame and power and to work through angry feelings and relive stress (a possible cathartic effect – see below for further discussion). However, the fact remains that there is very little research to underpin hypotheses in this area.

"I play games to escape real life, not because I have problems in real life, just because it helps me escape from the constant stress of school and responsibilities..."

(Children's Call for Evidence)

6.31 This lack of firm evidence for negative long-term effects from video games on the attitudes, beliefs and behaviours, means that we need to consider the question of harm and risk of harm within the broader biological, psychological and social context of the child or young person playing the game. This approach can help to highlight specific potential areas of risk for some vulnerable children and young people.

Other hypotheses regarding the effects of video game content

There is little evidence of a 'Catharsis' effect

6.32 Catharsis theory (Feshbach, 1961) suggests that there is a reduction in hostility after viewing violent content due to purging or release of aggressive drives and this has been used to suggest that playing games might contribute to reducing aggressive drives (Griffiths, 1999; Bensley and van Eenwyk, 2001). As yet there is no convincing research evidence to support this perspective.

There may be wider effects (i.e. beyond violence) on children's attitudes, values and beliefs

6.33 Some researchers have argued that video games have an impact at a social level by repeating and reinforcing stereotypes and social inequalities such as race and gender and therefore pose a special risk for children (e.g. Levin and Carlsson-Paige, 2003; Downs and Smith, 2005). Even those who talk about the benefits of games acknowledge the stereotyping that goes on (Gee 2003).

"Some games are actually educational without being explicitly designed to be so. They are fun, attractive and teach caring for self/others/animals/environment. Some teach cause and effect. Sadly many teach that violence can be indiscriminate and non-consequential – but these can be avoided. Many also re-enforce gender stereo-typing; there are some awful girly/pink/flirting with boys games aimed at young girls. My class all agreed the best games were simulations and adventures rather than point and shoot."

(Children's Call for Evidence)

Realism, interaction and repetition may lead to deeper learning

6.34   Gentile and Anderson (2003) divide games into three distinct eras within which violence varies dramatically. The Atari era (1977-1985) involving stick figures and token violence; the Nintendo era (1985-1995) where violence became more realistic and human characters were killed; and the third era (1995 – now) where games began to feature much more graphic and realistic violence. These new games are much more akin to real-life, with graphics that come close to TV and which include visual elements and sound effects which may alter the effect on the player. What this means is that earlier research may not be so valid (as it was carried out on older forms of the game) and will need to continue to be updated in order to take into account these new game features and even begin to break down which aspects of the game are responsible for a more powerful experience or effect of the player.

6.35   Gentile and Anderson (2003) put forward the argument that because video games are more interactive, the effects ought to be stronger than with passive media such as television. They believe game playing may lead to greater identification with the aggressor and greater imitation than when simply watching content. They also argue that repetition will lead to increased learning and that the interactivity makes the game more involving and perhaps more exciting. However, there is no direct evidence to prove this.

6.36   Advances in gaming hardware, or "peripherals", have led to new gesture-based controls. These are designed to increase interaction and make players use their own body movements to imitate actions they would make in the real world when playing games. In some instances games can be played without a controller at all, using screen sensors that recognise human actions. In addition, other peripherals enable players to experience the consequences of certain actions in the games, through vibrations in customised clothing. For many people, this enhances the realism and enjoyment of the game, and can make some games more accessible to some people. These technologies are still relatively new and there is therefore no research in this area to say whether such changes to game play experience may have negative effects for young children in some circumstances.

6.37   As yet, research has not addressed the effects of the repetitive nature of playing video games. Certainly, repetitive action is one way that children learn about the world and it could be speculated that the repetitive actions required in some video gaming (e.g. continual shooting of "enemies" as they appear in your path) would cause deeper learning at a neural (brain) level or via a cumulative learning effect (Goswami, 2008). (see Chapter 2 for fuller discussion of children's learning mechanisms).

The arousal brought on during some game play may have the same impact on children as high levels of stress

6.38   One theory is that people are emotionally and/or physiologically aroused by some content and this increased level of excitement could lead to aggressive behaviour. When we are threatened our body innately reacts by entering the "fight of flight" response – we feel anxious and prepare to fight or withdraw from the perceived threat with many aspects of the brain becoming activated and leading to a series of survival physiological responses – e.g. raised heart rate, release of stress hormones, diversion of oxygenated blood away from the brain. If the video game elicited this arousal response repeatedly in children, it is possible that there would be a cumulative and detrimental effect on the brain systems

involved in stress response during development (Johnson, 2008). We do not know how arousing or stressful games might be for children or indeed what aspects of the games lead to high levels of arousal. Nevertheless, stress can have a significant impact on children's development and is an important consideration in the context of potential harms to children from highly arousing content.

There is no clear evidence of desensitisation in children

6.39   Some researchers have argued for a desensitization effect of violent content. That is, repeated exposure to media violence such as in video games, will lead to a decreased brain and physiological response. This blunting of players' reactions could remove their normal inhibitions against aggression and lead to increased aggressive behaviour (Bartholow, Bushman and Sestir, 2006). There seems to be some evidence from adults that heart rate and some brain responses normalize after prolonged playing of violent video games which would suggest desensitisation in adults (Carnagey, Anderson and Bartholow 2007; Bartholow et al, 2006). However, in children the evidence is only suggestive and not definitive (Funk, 2005).

There is little analysis of the role played by the developmental stage of children

6.40   Much of the research in this field has used young adults as the subjects of research. Recent experimental design and survey studies have also looked at younger children. However, different effects according to age have not been studied reliably, despite this being one of the strongest indications we have of potential harm to children from content. I repeat here what I outlined in Chapter 2. Children are less efficient at reasoning because they have yet to develop their critical evaluation skills (how to judge information based on context) and they are worse at inhibiting irrelevant information. These are both skills that involve the frontal cortex which is one of the parts of the brain that takes longer to develop. This means that children are more dependent on perceptual elements (e.g. what someone/ something looks like) in making judgements about input due to their relatively immature ability to use context in interpretations. Moreover, younger children have more difficulties separating pretence from reality, especially scary pretence (Harris, Brown, Marriott, Whittall and Harmer, 1991) so content is potentially more frightening for younger children and is likely to have a more significant impact on their ability to process it without distress. Just as with other kinds of media content, we need an age-related approach when thinking about appropriateness of content within video games for children, with younger children protected from extreme content that may cause them harm.

Conclusions on issues of content

6.41   Most researchers consulted during the Review would say that they believe there is some kind of effect of inappropriate content on some children in some contexts and circumstances. But the right studies are lacking due to the nature and complexity of the problem and because a truly robust longitudinal research approach to this question would simply be unethical (i.e. to let children play violent games over time and assess the effects on their attitudes, beliefs and behaviour). However, there is also a strong view held by some academics, many of whom are based in the United States, that there is clear evidence of (short-term) harmful effects of video game violence on children and young people which has been published in a number of prestigious academic journals. There is little middle

ground to be found in this debate. It is difficult to base policy responses on such polarised research evidence.

6.42   It would not be accurate to say that there is no evidence of harm but equally it is not appropriate to conclude that there is evidence of no harm. Relatively small and short-term effects of playing violent video games on young children's behaviour and attitudes have been demonstrated, but many questions remain about how to interpret this at an individual level or it's meaning for behaviour and attitudes in the real world. Research has not taken a strong developmental perspective and I believe this is a key factor, as children of different ages have different levels of skill and understanding about the world (e.g. critical evaluation, ability to make judgments) which will impact on how they interpret content, their behaviour and their understanding of the world.

Findings from the academic literature: excessive use

Addiction

6.43   The term "technological addiction" has been used to describe excessive human-machine interaction. In order for a true 'addiction' to exist the individual would need to show the following:

- salience (how important it is to someone);

- mood modification (it is used as a way of consistently and reliably modifying their mood);

- tolerance (needing more and more of it to get the same mood modification);

- withdrawal symptoms (there is a set of consequences to its removal);

- conflict (the activity produces a conflict such that it has a negative detrimental effect on relationships, work, academic studies, life); and

- relapse (if you have cut down or stopped there is always the tendency to relapse back to excessive levels).

(Griffiths, 2007.)

6.44   When you apply these criteria to video game addiction you find that very few people are genuinely addicted, with 7% of teens in the UK found to play more than 30 hours of computer games per week (Griffiths and Hunt,1995, 1998; Griffiths, 2007). However it is clear that even in the absence of a diagnosable addiction, many children do show excessive game playing behaviour if they: play every day; for long periods of time; sacrificing other activities in favour of it; do it instead of homework; and it affects their mood. Where four or more of these factors are present it is suggested that while no true addiction exists, there may be cause for concern and a possible need for intervention (Griffiths, 2007).

Impact on social behaviour

6.45   Other concerns surrounding excessive game-playing centre on the opportunity costs for the child's development. A child who plays excessively, in isolation and socialises less with friends and family, for example, may have fewer opportunities for language development

and social interaction. This reduced opportunity could have negative developmental effects on linguistic and symbolic development, and possible knock-on effects on children's development of self-regulation skills and inhibitory control, which are so crucial for overall cognitive development. Moreover, children's social and emotional understanding is very dependent on discussions about emotions, feelings and moral transgressions. A significant decrease in this experience could also have a detrimental effect on a child's development.

6.46   However, video game playing is often a social experience. Children play together and, indeed, it can be an opportunity to learn about taking turns and other skills required to enable a successful interchange. This highlights the importance of the context within which the games are played.

Gender Differences

6.47   There are some gender differences in the amount of video game playing, with males being more excessive users than females. Reasons for this may be related to the nature of the games and differences in visual or spatial skills or socialization (Griffiths, 2007).

Differences By Age

6.48   Research has not looked at age-related variables, and the research that does exist with under-18s has looked mostly at teenagers. Moreover, no long-term studies exist that might begin to map the course of excessive video game playing to indicate whether this constitutes a risk factor for later difficulties.

Conclusions on issues of excessive use

6.49   In relation to these concerns we need to consider whether excessive gaming by children is due to the addictive nature of video games for them or if it is more a matter of parents not feeling able to manage their children's behaviour effectively. Children can take many activities to excess if their behaviour isn't moderated and balanced, whether it's playing games, watching TV or eating. Research has yet to determine whether some types of game are more addictive than others or whether there are inherent features, either individual characteristics (e.g. children with obsessive compulsive tendencies) or circumstantial features (e.g. children in situations of boredom) that predict high usage. It is certainly conceivable that children with particular cognitive, behavioural or personality characteristics may be more vulnerable.

6.50   A further issue here is that there is a cultural judgement about excessive behaviour. In the context of video games, excess is looked upon as being a bad thing. In the context of, say reading, it is conceived of as much more positive – the term 'book-worm' might be muttered somewhat proudly.

…many of the stories told in video games are just as involving, emotional and thought provoking as any film or book.

(Children's Call for Evidence)

Conclusion on the risks

6.51 Much of the research from the Active Media perspective assumes an imitation model of learning and argues for a direct influence of violent content on child behaviour. However, a broader perspective is needed to fully understand this relationship as it is so dependent on the child's early experience, interpretation and context of use. Other theories have been put forward, such as the view that playing violent video games is 'cathartic' thereby reducing aggressive drives, although these is no convincing evidence of this. There is some evidence that there may be a wider effect of content on children's attitudes, values and beliefs through narratives in some games. More research is needed into the effect of the interactive and repetitive nature of video game playing on children.

6.52 It is important to take into account children's age when considering the impact of content in video games, as with other kinds of media. Of particular relevance is their limited ability to interpret content using context and decipher reality from fantasy. It is as yet unclear whether the arousal brought on during game play may have some impact on children's brain development. The evidence for a desensitization effect of content on children is only suggestible.

6.53 Research on video game playing indicates that only a very small minority of children would be considered 'addicted' to video games, although a higher proportion are 'high users'. More research is needed into what might be the motivating factors within games or whether certain children will have a tendency towards excessive play due to inherent characteristics or circumstance. If game playing exceeds other important opportunities to learn language, socialise and interact more broadly, this could have wider developmental consequences for children.

Findings from the academic literature: benefits

6.54 Most of the focus of research into the benefits of video games has been on the cognitive and educational benefits they might afford children.

Cognitive

6.55 There has been research looking at what skills children learn through playing games. This centres on skills such as visual attention, reaction times, the development of cognitive skills such as spatial perception or strategic thinking, planning or hypothesis testing (Durkin and Barber, 2002). Players need to process information rapidly and think quickly to succeed, which could have benefits in real life (Taylor, 2006).

6.56 There is evidence in adult populations that visual perception skills are improved by prolonged action video game usage (Green and Bavelier, 2003, 2006). Improvements were noted in visual processing and attentional processing. Moreover, these effects generalised to other tasks (Green and Bavelier, 2007). It is unknown for how long the brain effects last if the person stops playing the video game. This will be a question for future research. Recent studies have also shown some improvements in decision making and attention in children of 6 years old following training on a computer screen (Rueda et al, 2005).

6.57 Goswami (2008) speculates that video gaming could be used to enhance skills of flexibility (ability to shift from one task to another) and behavioural inhibition (ability to prevent oneself from doing something inappropriate) in children. This would have a significant impact on their ability to regulate their own thoughts and behaviour, which is one of the developmental challenges of childhood and could be of great benefit to children. Research has not been done to discover whether cognitive skills such as these can be improved significantly by such practice or whether skills learnt through a video game might be transferable to other 'real-life' situations.

Educational

6.58 Claims are often made about the enormous benefits that games could offer to education as a tool for learning (e.g. Gee, 2003, Prensky, 2006). The 'affordances' of games, for example in providing instant feedback, in requiring 'active' learning, or in simulating particular types of real-world activities can make them especially well suited to some kinds of educational tasks not offered by many other modes of learning (Kirriemuir and MacFarlane, 2004; Mitchell and Savill-Smith, 2004). There is the question of whether you can pour curriculum content into game formats so people learn more effectively. There certainly seem to be benefits in terms of motivation (Taylor, 2006) and we would do well to harness and convert this into benefits in other kinds of targeted learning.

6.59 There are, however, two problems with stating these claims too strongly. Firstly, there is no more evidence that such benefits transfer into other aspects of life, and therefore can be considered true learning than there is with respect to harms. Secondly, most researchers and certainly educationalists would argue that using a video game or any other kind of technology to aid learning is not in itself the key to success. It is the context around the child and the technology (i.e. the skills of the teacher) that determines whether it becomes a successful learning experience.

Children with Special Educational Needs

6.60 Recently games have begun to appear that target specific learning difficulties such as the Thomas the Tank Engine game targeted to help children with autistic spectrum disorder to read emotions. Video games have been used in pain management with children and by physiotherapists and occupational therapists, (e.g. training arm movements) with some early reported successes (Coyle, Matthews, Sharry, Nisbet, and Doherty, 2005). There is a series of small, short-term studies that have looked at these positive aspects such as pain management. Griffiths (2005) reviewed this literature recently. Studies have found, for example, that children who play video games after painful treatments need fewer painkillers. The interesting question is what the mechanism of this is, and it has been suggested that video games take up the cognitive capacity that would otherwise be use to attend to the pain (Griffith, ISFE conference).

The benefits of potentially 'negative' content

6.61 There are other potential benefits of video games in terms of offering the chance to open up the imagination and explore other worlds, conquer fears and develop a sense of identity (Jones, 2002). There may even be benefits to children of what might be considered 'negative' or inappropriate content. Empirical evidence for this is slim, but it is possible that

the ability to experience things that are frightening, and to have some control over these through a game could be beneficial for some young people. Certainly in some circumstances an experience in a game can give children experience of something that in the offline world would be more damaging, helping them to prepare for risks (for example, getting 'virtually' mugged would be upsetting for a child but not necessarily harmful and might teach the child important lessons about self-protection).

Games as a cultural topic

6.62   A group of researchers argue that games should take their place alongside other cultural media. According to this view, games are worthy of study and analysis like other cultural texts (Buckingham and Burns, 2007). Moreover, cultural understandings young people develop through studying games may be carried over to their understanding of other narrative forms (Burn and Durran, 2007).

The benefit of 'fun' and family functioning

6.63   Finally, David Buckingham makes the point that there is much focus on children as 'becomings' – on a goal-oriented approach to their activities where benefits need to fit into an overall attempt to 'better' them in later life. He advocates consideration of the benefits to children of enjoyment and personal satisfaction from playing. Durkin and Barber (2002) measured a range of lifestyle factors and their findings suggest that playing video games is "one manifestation of an active and well-adjusted lifestyle".

Conclusion on the benefits

6.64   There are many potential areas where games could have great positive potential for the mental and physical health of children and for education. However, the research evidence for the beneficial effects of games is no more convincing than the work on harmful effects (Buckingham, 2008). Methodological arguments levied at research on harms (see above) also hold for the benefits (Gee 2003 and Subrahmanyam et al 2000).

Findings from the academic literature: new and emerging games

6.65   Games are converging with other media and are changing at a pace. The quality of the graphics is improving making them more realistic and characters are becoming more 'real-life'. Players can now collaborate with others in a host of game 'worlds'. People can live 'second lives' through these games with their own self-developed characters, personalities, physical characteristics and skills. Games have a player-designed element meaning the game makers no longer always determine the characteristics of games. All of these factors result in new issues related to potentially harmful or inappropriate experiences for children. A recent survey suggested that 25% of players of the massively multiplayer online role-playing games (MMORPGs) are under the age of 18 but there is no research on the potential implications of this as the technology is too new.

Avatars

6.66   The emergence of two and three-dimensional avatar-based online worlds such as Second Life has renewed debates about online communities. Here, participants select, customise or create characters, called 'avatars'. Their avatars can build houses, furnish environments, interact with others and even exchange virtual money while purchasing and selling items. The avatar can take on many characteristics which can change as the game develops. Several of these games are targeted at children and young people (e.g. Teen Second Life for 13-17 year olds; Habbo Hotel and Whyville! For 8-16 year olds; Kafai et al, 2007).

6.67   Concerns about these worlds centre on the relationship between fantasy and reality and the possibility of avatars taking part in inappropriate activities to which children might have access (e.g. Wonderland in the media; SkyNews, 2007).

6.68   It will be useful for future research to consider the effect of this on children's identity or self-concept. Within these games children can become someone very different, perhaps with characteristics that they lack or long for in real life. We know that the greatest impact on a child's self-concept comes from early parenting experiences. However, a child with a poor self-concept may be more susceptible to influences which could be either beneficial or damaging. The degree to which attributes of the avatar might be incorporated into the autobiographical self is as yet unknown.

The benefits and risks of online gaming are analogous to those from the internet more generally

6.69   Many online multi-player games are social in nature as participants join together in 'clans' or 'guilds' and exchange of communication (both written and verbal) is a significant part of the experience. It is here that online gaming merges together issues of both content and contact online (see Chapters 3-5), and with it's changing nature questions of risk become analogous to those of user generated content.

Excessive use in online gaming

6.70   One big concern in relation to online gaming is its potential for excessive use, given its open-ended, social and goal-driven nature (Ahn and Randall, 2007; Becker, 2002). There is some evidence from Germany that high users share reactions with drug addicts (Wells, 2005), but clear evidence of a group of 'addicted' online gamers is still lacking (Griffiths, 2007). As with issues of addiction to technology more generally, the question of whether it is a true addiction is controversial. Griffiths (2007) points out that one important mechanism that could be motivating players is that behaviour is only reinforced (positive feedback) intermittently and this is well known as a powerful mechanism to encourage persistent use. In this respect technology is facilitating excessive use and there are features which could be adjusted to minimise the potential for this kind of effect.

Benefits

6.71   In terms of positive effects of online games, they have challenged the notion of games as isolating and alienating, focusing instead on the sociability of these environments (Taylor, 2006). There is also excitement about the learning potential of these games and the potential for identity exploration in adolescents (Lee and Hoadley, 2006). These are discussed in more detail in Chapter 8.

Conclusions on new types of games

6.72   Games are changing rapidly, with recent improvements in graphics, games becoming more like real life, the introduction of avatars and with online games where players collaborate and communicate. Research into these new technologies is virtually non-existent due to their pace of development. However, there are certain speculations we can make about the potential impact on children's development, including the possibility for them to lead to deeper leaning, having a more significant impact on a child's sense of self and the potential for higher degrees of excessive use due to the 24/7 nature of the games. Online games present the same issues of content, contact and conduct as those seen in relation to the internet.

Future research

6.73   It is vitally important that the sole or primary cause of violence or other behaviours such as excessive use in children is not identified as the media or video games per se. Neither should the media be seen as playing no role. Many researchers are now arguing for a more comprehensive approach to these questions of social importance, which begin with an account of the problem or behaviour of interest (e.g. aggression) and carry out a comprehensive examination of all the factors that might impact on that, including the influence of the media. This would incorporate a holistic view of the child (such as the biopsychosocial model as outlined in Chapter 2) putting media violence in a proper context and could then go some way to providing an estimate of size of effect (Livingstone, 2008).

6.74   In this context a number of additional issues stand out as of crucial importance for future research to consider:

- **Consideration of 'at risk' groups of children:** research needs to begin to divide children up according to key characteristics of the child. This makes the distinction between risks for everyone and those for whom we can hypothesise there may be particular problems.

- **Taking a developmental perspective:** given what we know about children's development and their changing competencies and needs, research needs a developmental perspective so it can partition out 'effects' at different ages. In particular, there is little research on video games and the internet with younger (primary school) aged children (although there are obvious difficulties with methodology and research ethics here).

- **A focus on the nuances of games and the engagement of play:** in order for research to be informative for policy, it needs to break down and begin to understand the nuances of the games – differences in content, context, play length, realism, repetition and interaction, which will all potentially have a bearing on the game's impact.

- **Benefits of video games:** video games and new technologies have enormous potential to have a positive impact on children. Research is needed to dissect the factors that benefit the child, including an analysis of the 'engaging' elements of play and contexts in which educational learning are boosted when they take place through technology.

- **Benefits and risks of new online games**: research needs to catch up with the rapid development of new forms of gaming, especially online games. This should consider how children and young people are engaging with these new worlds and, as with other video games, what can be proven about both the educational and cognitive benefits as well as the incidence and impact of the risks.

GAMESMART.

Give your child safe games and web sites to use.

Avoid war and fighting games.

Make sure your computer is in a place you can see, not the bedroom.

Ensure the games are good and fun.

Set up the computer so they cannot load games or go on web sites without your permission.

Make sure the age rating of the game is okay.

Always get your child to ask before using the computer.

Regularly check what your child is doing.

Try not to let them play for too long.
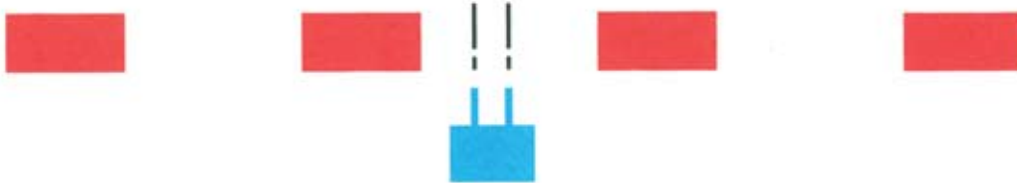
13 and under 'Gamesmart' competition winner:
Samuel Cornwell, age 7

Chapter 7

Video games: Managing Access Offline

7.1 In the last chapter I set out the current picture on video games, what children, young people and parents have told me about them and a discussion of the evidence on the potential risks some games may pose to children. Although the debate is highly polarised, it is clear that no firm evidence of harm is not evidence of 'no harm' and that we can speculate that if we take into account how children learn and develop there may be risks to them from playing games that are not designed for them. This chapter explores action already being taken by Government and industry to help parents restrict access by children and young people to video games which are not appropriate for their age and sets out my recommendations for further activity.

7.2 Over the course of my review I have found that all sections of the video games industry care about the safety and well being of children and young people. After all, children are clearly a key part of the video game market.

The video games 'value chain'

Game Developers	Game Publishers	Games Classification	Hardware Manufacturers	Games Retailers	Web Hosts for online games*	Consumer
Design and make games. Includes independent studios and in-house studios of publishers	Fund, commission and manage the game making process. Market and distribute games	Provide ratings for games based on age suitability	Make the consoles, PCs and hand held devices on which games are played	Includes high street shops, online shops, games downloaded online; 2nd hand market	Provide online platforms for games to be played	Parents and Children

*Not all video games are played online, therefore 'Web Hosts for online games' is only a semi-permanent aspect of the chain.

7.3   There are a number of mechanisms currently in place to minimise and manage any potential risks to children and young people, and to help ensure that children play video games that are age appropriate:

- a statutory classification system, which has the ability to ban games that may cause harm;

- a non-statutory information labelling system set up voluntarily by the video games industry;

- parental controls on gaming platforms;

- information and enforcement at point of sale;

- a self-regulatory system to ensure appropriate advertising of video games; and

- for games played online, there are mechanisms for monitoring and reporting inappropriate behaviour, and information about how to reduce risks to children and young people, including parental management (see Chapter 8).

7.4   The challenge for this review is to ensure that these mechanisms are adequate and in proportion to the scale of the potential risks; that they work effectively in ensuring children and young people encounter risks in video games that are age appropriate; and they are practical for both the consumer and industry. I recognise that leakage from any system will always happen, and by its very nature it is difficult to control. None of these interventions on their own will provide a single solution, nor will they completely eliminate the risks, not least because children will have access to video games via siblings or friends, outside of the legitimate retail market (e.g. car boot sales) or through web sites hosted outside the UK.

"While I personally would not buy such games, my children have access to friends whose parents would buy them, therefore the games are in circulation and there is very little any adult can do about this except warn their children first."

(Parent Call for Evidence)

7.5   Above all we know that children will be children and that they will seek out risk as part of their development and this may include wanting to play games that are not age appropriate. Therefore as well as ensuring that Government and industry put in place the right systems to support parents in managing their children's access to these games, we also need to ensure that children themselves are supported to make informed and sensible choices about the games that they play.

"Kids don't need protection we need guidance. If you protect us you are making us weaker we don't go through all the trail and error necessary to learn what we need to survive on our own. I know that in video gaming it may seem insignificant but it applies to gaming and the bigger stuff in life as well. So don't protect us guide us through the gaming world don't fight our battles for us just give us assistance when we need it."

**(Children's Call for Evidence)**

The existing classification system

7.6 There are currently two age classification systems for video games in the UK, which have different sets of labels depending on which process they go through. Both classification systems are highly regarded, though they differ significantly in their approach.

The Pan European Game Information System (PEGI)

7.7 The majority of games have 'PEGI' ratings. These are established through a 'voluntary information labelling' system for all games regardless of content, and are used in games in most European countries. The PEGI system is based on games producers responding to a questionnaire to self-certify the content in a particular game. This system automatically assigns age ratings for games suitable for children aged 3+, 7+ and 12+. All 12+ games are then retrospectively examined through game play, and a selection of games at 3+ and 7+ are also checked this way. Provisional age ratings are assigned for games suitable for children and young people aged 16+ and adults aged 18+, which are then checked by an independent body before being confirmed. As this Review was announced, consideration was also being given to pre-examining games applying for 7+ and 12+ ratings.

7.8 As PEGI is a 'pan-European' system, the ratings have to account for the different sensitivities of all member countries. This means that the ratings given reflect a much wider spectrum of views than a national system, catering for just UK sensitivities might do. So, the UK's concern about bad language for example, is accounted for alongside issues that are of concern in other European countries, but which many in the UK may feel less worried about e.g. certain religious profanities. Ratings are not adjusted for individual countries, but to illustrate the main reason(s) why the game content led to a particular rating all games rated under PEGI carry pictograms (see above). This allows parents and others to make informed choices about particular games.

7.9 In addition to this, the criteria PEGI use to rate games is predominantly based on game content, and has a limited ability to take into account the context in which certain content appears. This is partly to account for the fact that the nature of game playing means that a particular section may be played repeatedly, and may be seen out of context, in order to progress a level. In addition to this, it is more difficult to judge the context of a game when trying to account for so many countries' sensitivities.

7.10 Games producers use the PEGI rating system on a voluntary basis in the UK. However, console manufacturers will not allow games to be played on their system if they have not been rated by either BBFC (see below) or PEGI in the UK. Similarly, the vast majority of UK retailers will not stock games without one of these ratings, thus ensuring that games generally go through one or other of the ratings processes. So in practice, unrated games are not available in the legitimate UK market. As a voluntary system, it is not an offence to sell a PEGI rated game to someone under the age rating.

7.11 In addition, if a hard copy game has online capability, it will carry an additional 'PEGI online' logo to advise consumers that it is possible to play the game online.

The British Board of Film Classification (BBFC)
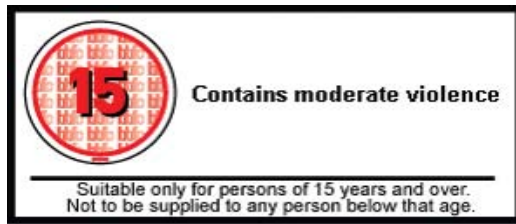
7.12 Video games with gross violence, criminal or sexual activity, human genitals, certain bodily functions, or games with linear film content that isn't integral to the game, have to go to the BBFC for a statutory classification before they can be released in the UK. This accounts for around 4% of games (ELSPA, 2007), and effectively means that the PEGI 18+ category isn't used in the UK because all games likely to receive an 18+ PEGI classification are considered and rated by the BBFC.

7.13 This ratings process involves playing all video games prior to allocating a classification. Decisions are based on both content and context of games and account for UK sensitivities only, which are established following extensive public consultation.

7.14 The BBFC can also choose not to classify a game, which makes it a criminal offence to supply it in the UK. In addition, it is a criminal offence, punishable by up to six months in prison and/or a fine of up to £5,000 to sell or hire BBFC classified games to someone under the age classification.

7.15 Both systems have a complaints process for members of the public and appeals processes for publishers who are not happy with a particular rating.

Strengths and weaknesses of the current classification system

7.16 The process for classifying games in the UK works reasonably well. Some say that it is one of the 'strictest in Europe'. Broadly speaking, it is a relatively proportionate response to what we know about the potential risks of harm, in the sense that it is enforced with a statutory underpinning for games with more extreme content, with a voluntary 'information labelling' approach for games at the lower end. Despite the fact that most video games don't have to be classified by law, the vast majority of games are voluntarily rated through PEGI, demonstrating that this is an industry that wants to be responsible, is willing to self-regulate, and recognises the concerns around children's wellbeing and the need to give consumers information about the content of games.

7.17 A vocal minority feel the classifications should be stricter and usefully seek to keep the discussion open about content in some games. However, there is a general consensus that the age ratings broadly reflect UK consumers' expectations, with few complaints made about ratings under either system. However, the criteria PEGI use to rate games can often lead to stricter age ratings than the BBFC might have given. On the one hand this may reassure some consumers that the system is rigorous. On the other hand, if video games were to consistently receive age ratings that UK consumers feel are too severe, there is a danger that the classifications would become less meaningful and potentially be disregarded. There was some evidence of this in my focus group research and my Calls for Evidence, although some have argued that the opposite can also happen, in that PEGI

criteria may sometimes lead to a more lax rating being given than the UK public may expect.

"Parents aren't educated well enough in the age rating system for games, and don't consider them to be as serious as those perhaps on a movie".

(Children's Call for Evidence)

The balance between a voluntary and statutory approach

7.18   Games currently require statutory classification if they contain 'gross violence' towards humans or animals. This threshold for statutory classification is quite high and is inconsistent with that for film and DVDs especially given what 12+ games can entail.

PEGI 12+ rated games can include:

- Violence of a slightly more graphic nature than 3+ and 7+, if it is towards fantasy characters (any violence towards human looking characters or recognisable animals should still be non-graphic).

- Nudity of a slightly more graphic nature than 3+ and 7+ (but still must not show genitalia).

- Some words amounting to sexual innuendo (but not in a form that is considered 'bad language').

- Mild bad language, which falls short of sexual expletives.

- Obvious innuendo of sexual activity even though the couple cannot be seen or clearly seen.

7.19   This type of content needs to be considered in the context of the advances in games technology (e.g. in terms of realism) and in the light of the evidence set out in Chapter 6 on how children of different ages and stages of development may interact with games. In particular, in games rated 12+ there is a shift towards content that requires more sophisticated evaluation and also content that parents may want to assess in terms of its suitability for individual children.

7.20   Responses from the video game industry supported a system that was backed by the law and offered punitive measures for non-compliance. Video game retailers similarly say this would make staff training easier, and it is critical that the system is statutory so that they are able to deny sales.

The ability to reject games for classification

7.21   There is public support for mechanisms that allow the BBFC to reject a game if it is judged that harm may be caused to potential viewers, or through their behaviour to society, with 69% of respondents to a recent survey saying they were in favour of banning some violent video games, compared to 23% who disagreed with it (ELSPA/YouGov 2007). This makes supplying such games or offering to supply them a criminal offence, punishable by an unlimited fine and imprisonment for up to two years. Whilst the BBFC have only felt the need to take this course of action on very few occasions, the provision is used as a way to initiate a dialogue between the classification body and developer and therefore leads to

changes being made to many video games (e.g. introducing 'solarisation' effects to reduce the impact of death scenes), which avoids complete rejection.

7.22   I fully appreciate the view of those that disagree with 'banning' video games and believe that adults should be free to choose what games they play, so long as existing laws applicable in the UK, such as the Obscene Publications Act are not contravened. However, at this moment in time, when parental awareness of the risks and use of the classification system needs improving, and given the lack of effective control of such games in many households, it is important to maintain the ability of the state to intervene in this way and promote the debate. This may be something that gets reviewed when we feel more confident about how parents are using the classification system.

Consumer awareness and use of the ratings system

7.23   Where the current classification systems have been least effective is in relation to consumer awareness, understanding and use of the ratings information. This was something that came through strongly in my Call for Evidence and which needs addressing as a matter of priority.

> *"I knew that the symbols meant suitable for people over such and such an age but it is often not clear from the symbols what the contents of the games is".*

(Children's Call for Evidence)

7.24   Recent surveys have shown that overall awareness of the video game rating systems is not as good as it should be, with only around half of people saying they were aware one exists (ELSPA/YouGov, 2007 and Microsoft/StrategyOne 2007), although awareness tends to higher amongst those that play and purchase video games (Neilson Study, 2007). Whilst different studies report different levels of awareness, there seems to be a general consensus that awareness of BBFC classifications is higher than awareness of PEGI ratings (ELSPA/YouGov 2007; BBFC 2007; Nielson Study 2007). In particular, familiarity with the PEGI 'pictograms' is fairly low (Nielson Study 2007). Although, given the PEGI system was only introduced in 2003, this may come as no surprise.

7.25   Very early on in my Review, it became clear that having a dual classification system and two sets of symbols often made things confusing for the consumer, especially for parents and children. For example, 41% of respondents to a 2007 YouGov survey said that the existence of these two separate systems was confusing. It was also often said that because the BBFC is known to be about 'suitability', this sometimes had a knock-on effect of leading parents to misunderstand the PEGI ratings as corresponding to 'ability' or 'skill' ratings. This poses a risk if parents become less concerned about buying a video game that is rated above their child's age because they can be persuaded by their child that they have the advanced skills to play it. This confusion also makes raising the public's awareness and understanding of the ratings difficult for the video games industry.

7.26   The meaning of some of the PEGI pictograms is also felt to be unclear, with many mistaking the 'discrimination' icon for 'multiplayer game' and the 'sexual content' as being a game that is 'suitable for a boy or a girl.

7.27   Also, whilst BBFC predominantly look at games with more extreme content, not all of the games rated by the BBFC will end up with an 18 classification, as the content and context will sometimes be judged by the BBFC as suitable for the 15+ (or even 12+) categories, and games with linear film content can also be given BBFC 'PG' or 'U' ratings. This means that consumers are also faced with the confusion of 15+ BBFC rated games and 16+ PEGI rated games for example.
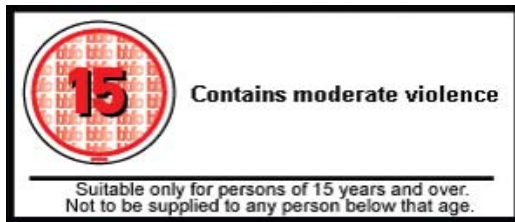
7.28   It was also quite clear that age ratings on video games generally do not have the impact they should in terms of influencing purchasing behaviour, and do not hold the same weight as the same ratings on DVDs. For instance, almost half of respondents to a 2007 YouGov survey said they rarely or never took notice of the ratings on video game packaging when they purchased or played games. This may be because 'games' are perceived to be part of childhood and not something that parents traditionally worry about.

7.29   As highlighted above, my focus group research demonstrated that parents do feel that they need more and better information about what is in a game to help them decide what is appropriate for their individual child. This is why it is so important to have a trustworthy, high profile and authoritative classification system like we have for films.

Improving the video games classification system

Better information and support for parents and children is needed

7.30   It is clear that whatever the classification system is, parents need more and better information on which to base their decisions about what their children play. Even today, with a statutory age classification system that defines which games are only suitable for adults, the message is still not getting through to parents and children are being bought and are playing games that have been designed for adults. For example, 52% of respondents to a recent survey said they knowingly or deliberately purchased a game for their child, which according to the rating given, was not suitable for their age (ELSPA/ YouGov 2007). This urgently needs to be addressed.

7.31   There are a number of challenges:

- There is a general misconception that parents don't need to worry about 'games'.

- This is reinforced by a generational divide which means that most parents wont play the game themselves or be aware of the huge developments that there have been in game technology and realism.

- It is not surprising that with today's busy lifestyles video games are used as babysitters, along with other media.

- The information that does exist is generally on websites, which relies on parents seeking it out in the first place.

7.32   In my view one of the key messages which has to be delivered to parents is that not all video games are suitable for all children. Reforms to the classification system and improvements in the contribution of retailers through in-store information described below should help in reinforcing this message. But there will be no substitute for a sustained and well targeted information campaign. **I recommend that the video games industry (developers, publishers, retailers) works with the BBFC and PEGI administrators to develop and deliver a comprehensive, high profile communications campaign about video games. I recommend that this is funded by industry with support from Government on reaching parents through the channels available, such as Parent Know How**. This campaign should:

- include messages directed at parents and carers, and children and young people, and be based on research which identifies particular groups to target messages, according to attitudes and use of the classification system;

- include messages about the positive aspects of game play;

- take into account the role and perspective of fathers and male carers, possibly by working with organisations such as the Fatherhood Institute[1] to gain an insight into the best ways to deliver these messages;

- make use of existing online information sources such as 'askaboutgames', which should be improved to provide more detailed information on content of all rated games (similar to the current 'extended classification advice' from the BBFC for video games with extreme content) and information about the potential risks in online gaming, and how to manage them;

- include awareness raising about parental control mechanisms on games consoles and PCs (see section below);

- include improved information at point of sale (e.g. posters, shelf strips, audio visual adverts on television screens or audio announcements in high street retail, and similarly prominent information online);

- exploit opportunities such as games launches in order to get key messages across.

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1 www.dad.info

There is a case for a tougher approach to rating some games

7.33 From my review of the child development research evidence I am confident that the ratings of age-appropriateness currently being applied by both the PEGI and BBFC systems are broadly consistent with what we understand about how children learn and develop. However, I do not think that only putting 'adult' games on a statutory footing is sufficient to inform parents of potential risks or to protect children from potential risks. One way to strengthen the current system would be to extend the requirement for statutory classification to games which currently attract a 12+ rating. The definition of what would constitute a 12+ game in law would have to be considered through public consultation, but could broadly reflect the existing ratings, by incorporating games with graphic violence, nudity in a sexual context and bad language for example. This would mean that selling any game rated 12+ and above to a child under that age would become a criminal offence. This would have a number of potential benefits:

- it would align the video games classification system with that of film, reinforcing for parents that games have to be taken as seriously as films, encouraging them give the ratings more consideration at the top end;

- it would be proportionate to the potential risk of children playing games that are not suitable for them, as it would create offences for games with stronger content differently to those with milder content, which is consistent with the evidence on harm;

- it would incentivise retailers not to sell games to children under the age rating for games at 12+ because punitive sanctions would increase. This would also incentivise and make it easier for retailers to train staff effectively, resulting in better information for parents at the point of sale.

7.34 Therefore **I recommend that future reforms of the classification system should incorporate an extension of the statutory basis to include video games which would otherwise receive a 12+ PEGI rating**.

7.35 **I also recommend that games at the lower end (e.g. 3+ and 7+ rated games) should be exempted from statutory classification (except where they already require statutory classification because of linear film content).** This is because of the lack of evidence on the risks they pose and also because it is unlikely that children at this age will buy their own games. Further public consultation will be needed on other potential exemptions from statutory classification.

A single consumer facing classification system is vital

7.36 Raising parental awareness, understanding and use of video game age ratings would be made much easier if there was a single classification system in the UK. Responses to my review have been almost unanimous in suggesting that there should be a single classification system for video games, with a single set of labels for consumers. There was a general agreement that it should be the responsibility of one of the existing classification bodies (BBFC or PEGI), which are both highly regarded, but there was not a consensus about which it should be.

7.37 In order to enable children young people and their parents to make informed and sensible decisions about the games they play, the UK ratings system must include the following elements:

- clear age ratings;

- clear accompanying descriptors which explain game content;

- trustworthy;

- enforceable where there are risks of potential harm.

7.38 Fundamentally, any rating system relies on awareness amongst parents and carers, as well as children and young people, which means that whatever system is chosen it needs to be supported by an ongoing and comprehensive information campaign in the short term, the effectiveness of which should be monitored.

7.39 An effective rating system must also:

- *Work for the games industry* – By being timely and cost effective and getting the balance right between self-assessment on the part of developers and independent scrutiny.

- *Support retailers* – The system must be sufficiently authoritative to incentivise retailers to sell games appropriately.

- *Be flexible and future proof* – Because games are changing and the rating system needs to adjust quickly to reflect the new risks that these changes bring. This includes the increase in online gaming; convergence of different media on the same software and within the same application; games that are bought in pieces, and changes in game play experiences.

- *Be able to block the release of some games* – In the UK where it is judged that 'harm may be caused to potential viewers, or through their behaviour to society[2]'.

- *Reflect the evidence on potential harms* – Which means that consideration must be given to at what point it is necessary to introduce statutory classification.

7.40 There are a number of ways in which a single classification system could be achieved. These range from using only the current European system (PEGI) to giving the BBFC the responsibility for rating all games released in the UK. Having considered a number of different options, it is quite clear that none of the approaches come without constraints and concerns. For example, a solely PEGI system would not include an option to block the release of certain games in the UK, as this would not be acceptable to some other European countries, and which, as set out above is an important component of the current system for UK consumers. Equally, a solely BBFC system may overlook the increase in online gaming and the international nature of the gaming market and game play, and could undermine the existence of PEGI in Europe.

7.41 A hybrid of the two systems which draws on the strengths of both approaches and the excellent cooperation that currently exists is therefore needed – but this will not be straightforward to achieve. A key choice in developing a hybrid model is deciding which

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2 As defined in Section 4 of the Video Recordings Act 1984

classification body should provide the consumer facing element: the age ratings and descriptors. This is the most important change that is needed to support children and young people and to provide information to parents. On balance I believe that the best way to achieve this would be to build on the already established brand of the BBFC and parental awareness and understanding of what those ratings mean when it comes to films and DVDs.

7.42 The evidence submitted to the review suggests that a BBFC approach would bring further advantages to a system for rating video games, including:

- continuing ability to block the release of some games in the UK where there are concerns that harm may be caused;

- taking context into account when assessing the potential impact of games;

- judgements underpinned by extensive consultation with the UK public, including children and young people;

- potentially fewer instances of excessively high (or low) classification, which can undermine confidence of UK consumers;

- an established system of clear and detailed descriptors that explain content, helping parents to make judgements in relation to individual children;

- able to incorporate increasing convergence between games and films;

- more consistent with offences that exist for films; and

- easier for retailers to implement and to train staff to understand.

7.43 However, I am also clear that the BBFC could not successfully undertake this role without full and effective collaboration with the existing European rating system, especially in the context of the expansion of online gaming, where players are presented with different age rating labels.

7.44 In addition to this, there were some reservations raised about the BBFC, which would need to be considered in relation to them taking on a more significant role in classifying video games. For instance, some in the video games industry may be concerned about a shift towards a rating system that does not fully understand the industry. For example, they would be keen to ensure that:

- there is appropriate representation and involvement from the video games industry;

- the video games industry are fully consulted on setting and evaluating the criteria for rating video games;

- those criteria are appropriate to rating interactive content and recognise the differences with linear material;

- there is transparency and clarity in how games are rated; and

- the personnel rating the games are experienced in the field of video games.

7.45   The BBFC would have to expand considerably if it were to take on this expanded role. It would therefore have to provide assurances to the video games industry and Government that it could adjust operationally, without placing unreasonable burdens on industry or creating delays to the ratings process.

7.46   It has been suggested to the Review that given the relative dominance of the UK in the European games market, a BBFC-led system risks undermining the European system (PEGI) to such an extent that it would collapse. This could result in significant burdens on the games industry as publishers would then need to secure classifications through many different systems across Europe. This, in turn, could have a knock on effect on the vibrancy of the games market which would not be in the best interests of children and young people who so enjoy video gaming.

7.47   To address these concerns I suggest that a partnership approach between the BBFC and PEGI should be pursued. **I recommend a hybrid classification system in which:**

- **BBFC logos are on the front of all games (i.e. 18,15,12,PG and U);**

- **PEGI will continue to rate all 3+ and 7+ games and their equivalent logos (across all age ranges) will be on the back of all boxes.**

7.48   This system would involve BBFC rating games from 12+ upwards (under the extension of the statutory underpinning from this age recommended above). Ratings for 3+ and 7+ games, where the evidence of potential harm is weakest, would continue to be voluntarily classified through the PEGI system. These are also the ages where context is less relevant, as evidenced in the child development literature, which means the approach of the PEGI system would be most appropriate. However, to make this work for the UK consumer, the PEGI ratings should be translated into BBFC symbols and descriptors. To achieve this BBFC and PEGI would need to work together to agree on alignment between the criteria for PEGI rated 3+ and 7+ games and BBFC's 'Universal' (U) and 'Parental Guidance' (PG) categories respectively. Consideration could also be given to using the 'Uc' category for games that are particularly aimed at pre-school children. Online games should also be classified in accordance with this division.

7.49   However, I am also clear that there still has to be consumer awareness and understanding of the PEGI system in the UK, given that video games will continue to receive PEGI ratings across the rest of Europe, and the consumer will be presented with these ratings online, which will increasingly become more prevalent. This is why I am also recommending that all UK games are supported by the corresponding PEGI age ratings and descriptors, which should be shown on the reverse side of the packaging.

7.50   In the context of this Review, where my remit has been solely to consider the interests of children and young people, I recommend the hybrid classification system set out above, with a BBFC consumer facing element in the UK. However, there are other perspectives, and different possible approaches. Implementation of change will require full public consultation.

Measures taken by retailers

7.51 Retailers are in the ideal position to present information to consumers about the rating system and other ways of ensuring that children and young people are protected from inappropriate or harmful material in video games. They are also able to provide a key safety valve by not selling video games to children and young people under the age ratings.

7.52 There are a number of existing practices in place, some of which are enforced through law, others which are voluntary industry codes.

7.53 In particular, the action of retailers is key to ensuring that games that have not been rated are generally not supplied in the UK and that both the statutory and voluntary elements of the current classification systems are enforced at the point of sale:

- Retailers commit an offence if they supply a hard copy video game in the UK, which should have been classified by the BBFC (either because it wasn't submitted, or the BBFC chose not to classify it because of concerns about potential harm).

- For those games that don't have to be classified by the BBFC, the vast majority of retailers make an undertaking, through compliance with the Video Standards Council Code of Conduct, not to sell hard copy games without a PEGI rating.

- An offence is committed if a BBFC classified game is sold to somebody under the age rating.

- Many retailers also have a policy of not selling games rated by PEGI to children and young people under the age rating.

7.54 In addition to this, there are trade bodies which represent the entertainment retail sectors and promote responsible retailing of video games:

- The Video Standards Council (VSC) represents most major retailers of video games (notable exceptions include some major supermarkets). Their code of conduct states that members take all necessary steps to ensure no BBFC games are supplied to anyone under the specified age, and use all reasonable endeavours to ensure PEGI rated games are not supplied to anyone under the specified age, and recommends that retailers display prominently details of BBFC and PEGI classification symbols.

- Around 90% of outlets for entertainment products in the UK are also members of the Entertainment Retailers Association (ERA), the UK trade organisation representing the retail and wholesale sectors of the music, video, DVD and multimedia products industry. This includes most generalists, specialists, supermarkets, independents, internet mail order and digital retailers. The ERA code of conduct requires its members to comply with the Video Recordings Act and display details of the classification symbols required by the Act (i.e. BBFC ratings). It does not require its members to display the PEGI symbols, or treat PEGI games in the same way as BBFC rated games. That said, many ERA members invest in and offer staff training about both PEGI and BBFC ratings, and many are also members of the VSC, or have policies of treating the two rating systems in the same way.

7.55   In responses to the Call for Evidence many retailers said they would like to be part of any consultations on the best way to educate parents, and would contribute views on the best and most practical ways of doing this.

Strengths and weaknesses of the current approach

7.56   A great deal of work is done by retailers, particularly specialist retailers to raise awareness of the rating systems and train staff not to sell video games to children under the age rating.

7.57   Whilst various emphasis is put on training staff about the rating systems, on the whole, most stores offer it using a VSC training DVD, before allowing staff to work behind the tills. Staff are also often asked to sign a form to confirm they have been trained in the law relating to age restricted sales and are aware of in-store controls to prevent such sales. Re-training exercises for all staff, also take place with varying degrees of regularity (approx every 3 – 12 month).

The dual classification system and different store policies can lead to confusing inconsistencies for parents

7.58   There seem to be some inconsistencies across different retailers, depending on the relative priority of video games merchandise in the store, which can reinforce confusion for consumers, and some entertainment retailers do not follow the Codes of Conduct described above. For instance, many shops have policies of treating the voluntary PEGI system as if it were statutory and refusing sales where there is no proof of age, whilst others treat the PEGI ratings as advisory and would not refuse a sale to somebody under the age rating. Many stores also use till prompts to remind staff to check the age of the customer before processing the transaction, however, some only have them for BBFC rated games. In addition, there are stores that undertake frequent monitoring of staff, whist others don't do any.

7.59   In some cases in-store information about video games is not sufficient. Apart from very specialist or flagship gaming stores, there seems to be a lack, or minimum level of in-store information about the classification systems that is separate to information on boxed products (for example, clear labelling on shelves). This may be because of the lack of incentives on retailers to do more in this area, particularly in relation to the PEGI ratings where there is no statutory enforcement and where retailers are not penalised for not providing information. There were mixed views in response to my Call for Evidence on this. Some respondents said that more prominent information would not help, either because it was the boxes that mattered or because they felt parents would ignore it anyway. However, others felt that retailers have a significant role to play, and should be called upon to help in educating about the age rating systems, citing the Entertainment Software Rating Board (ESRB) Retail Council in America as demonstrating good practice in this area.

> **Entertainment Software Rating Board (ESRB)**
>
> ESRB is a non-profit, self-regulatory body, which assigns voluntary video game content ratings, enforces industry-adopted advertising guidelines and helps ensure responsible online privacy practices for the interactive entertainment software industry in the US and Canada.
>
> ESRB does not have the authority to enforce its ratings at the retail level but it works with retailers and game centres to ensure that information explaining the rating system is displayed to consumers, and policies not to sell M (Mature) and AO (Adult Only) rated games to children under age, are monitored.
>
> In addition to this, members also participate in at least two 'mystery shopping' audits each year to measure and track the level of sales policy enforcement and whether stored display signage explaining the rating system. Results are posted in aggregate on the ESRB website, whilst individual retailers may use their results to help gauge their performance and implement improvements, where necessary. The results charted on their site demonstrate increasing improvement since the council was created in 2005.

7.60   Many retailers talk about the difficulties they face in enforcing the rating systems by refusing sales of video games, especially in relation to the PEGI rating system as there is no offence committed, so it can be harder for staff to refuse a sale. In relation to 18 and 15 rated games there were concerns raised about children asking friends to buy games for them and about parents buying games for their children regardless of the age-rating and the retailer's advice.

7.61   Linked to this, it is also difficult to independently monitor retailers' compliance with the age rating systems. Trading Standards are able, under the Video Recordings Act 1984 to carry out test purchases in relation to video games rated by the BBFC. However, pressures to carry out test purchase operations elsewhere (e.g. alcohol, cigarettes, knives etc.) mean that video game test purchasing is often sidelined. Very little is done to monitor sales of PEGI games to children under the specified age. As no offence is committed Trading Standards do not have a duty to carry out test purchase operations. Whilst some informal monitoring takes place and some stores carry out their own independent monitoring, which results in punitive measures, including sacking, there is no official, comprehensive and independent process carried out by any of the trade bodies (e.g. ERA; VSC).

Future improvements at the point of sale

7.62   Good work by some retailers is already underway, and the introduction in the longer term of a more coherent classification system will address many of the problems that have been raised about the point of sale. In the meantime steps can be taken to improve monitoring of enforcement across the board and to help support parents by providing clear and prominent information in stores and on websites.

7.63   In particular retailers could do more to assist in the education around the age rating system and parental controls on consoles. There is scope for them to provide more information, more prominently to consumers, in order for it to make an impact on buying behaviour. Different stores will want to take different approaches depending, for example, on whether

they are a specialist retailer or not. The approach must be appropriate and proportionate. To address this **I recommend that the Entertainment Retail Association and the Video Standards Council work together to review and align their Codes of Practice. I also recommend that this work should include:**

- **Consultation with retailers and with the public to agree 'minimum standards' in the provision of in-store information and advice for parents about video games**

- **Consideration of the best way to use in-store information to inform consumers (e.g. through use of television or audio information, or extended classification information)**

- **Consideration of using specific and prominent shelf level notices where 18+ rated games appear, in order to support the message that 'not all games are for children'**

- **Consideration of punitive measures for non-compliance with these codes**

- **Agreement on formal, independent monitoring of what information shops provide, the results of which is made available to consumers**

7.64 Much can be achieved through voluntary codes of practice in this way. However, formal monitoring of compliance with the statutory age-rating system is also needed. This will inform future policy and enable effective action to be taken against those who do not comply and support to be offered to retailers whose staff are struggling to implement the current system. **I therefore recommend that there should be periodical monitoring by Trading Standards of retailers' compliance in not selling video games to underage children and young people, which would need to be properly resourced by Government.** Any compliance activity should be consistent with the Government's better regulation agenda. In the short term this should be done in relation to 15 and 18 rated video games and, in future, in relation to 12 rated games if this is introduced. Where small business is concerned, Government and regulators should work closely with retailers to design specific approaches to achieving compliance and where possible, to put in place a simplified system of advice and guidance to help businesses understand what they need to do to comply.

7.65 I see retail outlets as being in an incredibly strong position to provide information to consumers and influence purchasing behaviour, and feel that this is an area where it is critical to get it right. Therefore retailers' performance after one year should be assessed by Government and Industry, and if a substantial improvement has not been made in providing in-store information, high street retailers should look at positioning 18+ games separately to other video games.

Existing mechanisms to ensure appropriate advertising of video games

7.66 Efforts to ensure the responsible advertising of video games should be seen as one of the key mechanisms to minimise and manage potential risks to children and young people from playing video games that are not appropriate for their age. Advertising spend in the video games sector is currently growing and although TV advertising remains the predominant medium of choice, video games are marketed in increasingly varied and

innovative ways. Adverts in the national press, banner adverts on websites and trailers on cinema screens also remain established means of advertising. However, advances in technology have led to the growth of promotional Web 2.0 product websites and adverts in video gameplay itself.[3] This has been accompanied by the convergence of media, which has meant, for example, that trailers can be found online as well as on cinema and television screens.

7.67   Some 42% of people who responded to a question relating to the advertising of video games in my Call for Evidence said that the advertising sector must be more responsible in its marketing to children and young people. An irresponsible video game advert has the potential to be a piece of inappropriate content itself, but can also be part of a process that encourages children to play unsuitable products.

7.68   The advertising industry has been proactive in putting a self-regulatory system with codes of practice in place to minimise the exposure of children to inappropriate products and advert content:

- As described in Chapter 4 the self-regulatory system administered by the ASA helps protect children from inappropriate content and targeting. In addition to the obligations for advertisers outlined above in the CAP Code, the same principles apply to adverts on broadcast media through the Broadcast Committee of Advertising Practice Code (BCAP Code).

7.69   In addition to this there are various game industry-led codes of practice relating to advertising:

> **ELSPA (Entertainment and Leisure Software Publishers Association)**
>
> ELSPA is the trade association which represents and supports the interests of video games publishers and console manufacturers. It provides industry with guidelines on regulations and ensures they act responsibly. Membership includes most of the major companies concerned with the publishing and distribution of video games in the UK.
>
> *www.elspa.com*

- **The ELPSA code:** this is intended to supplement the ASA system, and states that even in cases where the ASA does not have a remit, advertisers should still ensure that advertising or promotional material is compliant with the BCAP and CAP Codes. Although compliance with the ELSPA Code is voluntary, ELSPA reserve the right to take action against video games publishers on the back of any upheld ASA adjudications; it can specify courses of corrective action or impose any reasonable sanction including expulsion from ELSPA.

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3 Based on information provided by ELSPA.

- **The PEGI Code of Conduct:** games publishers have to sign up to this code if they want to use PEGI classification system. It requires publishers to make sure that they have displayed the age rating icons and content descriptor correctly and also that the content and targeting of their advert is responsible. Publishers are not allowed to specifically target 16+ or 18+ products to audiences for whom the video game product is not appropriate. This system is supported by a complaints mechanism, under which the PEGI Enforcement Committee can order corrective action, impose monetary fines, or ban members.

- **The Video Standards Council's (VSC) Code of Practice:** under this code publishers and distributors are asked to "comply with the criteria specified by the ASA" as well as complying with the PEGI and BBFC requirements.

7.70   Finally, the BBFC also have a role in restricting access to adverts of video games that are not age appropriate for a particular audience.

- The BBFC is involved where video game adverts are distributed on a video recording or shown in a cinema. If the advert is given an age-restricted rating it cannot legally be supplied or exhibited to anyone below that age. Video game publishers are legally required to show the BBFC classification symbols clearly in line with the Video Recordings Act.

Effectiveness of the current system

7.71   Even though I did not ask specifically about the responsibility of advertisers in my Call for Evidence, around two fifths of those who responded to a question relating to the advertising of video games claimed that the advertising sector was responsible for children wanting to play games that were inappropriate for their age. Although there is clear evidence that under-18s play 18 rated video games, there is little research to show whether 18 games are being marketed to children. There is some evidence that illustrates concerns about the content of games adverts but it is not overwhelming.

7.72   In responses to my Call for Evidence there was agreement across industry, parents and video gamers that advertisers did have a duty to behave responsibly, and many suggested ways in which this could be improved; for example by ensuring online adverts contain better labelling information.

7.73   Other respondents varied in their opinion of the role of advertising in managing the risks related to children and video games. Whilst some felt that the advertising sector did a good job of informing parents and enforcing guidelines; a slightly smaller group suggested that although the advertising sector had a large potential role to play, more robust compliance measures are needed; slightly fewer still, believed that the sector did nothing to support either children or parents.[4]

"In advertising the industry adheres to the rules regarding watersheds and appropriate targeting without any noticeable issue."

(Video Games Publisher)

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4   Call for Evidence Response to Q.10

"Both advertising and the ratings boards seem to pretty much police themselves until a complaint is made."

(Video Games User)

"They spend too much money in launching a product than thinking about how they can help mange the risks I feel."

(Practitioner working with Young People)

"I don't think advertisers help to manage the risks – they are just interested in selling the games."

(Parent/Carer)

7.74   Also, in my focus groups, parents spoke about feeling under pressure to buy games that were aimed at older age groups than their own children; some of whom gave in to the pressure despite knowing that the content of these games might not be appropriate.

7.75   However, it is not clear whether the aspiration to play these inappropriate games stems directly from advertising. Many parents who felt under pressure to buy unsuitable products often said that peer pressure on their child to get particular games was fierce, and children often referred to learning about the latest games from video game publications or websites. BBFC research into why gamers liked *Grand Theft Auto* (18) suggests that gamers under 18 were keen to play the game because of the talk in the playground relating to imaginative and varied game play, and experiences that were unlikely to be experienced in real life (Cragg, Taylor and Toombs, 2007).

"Parents reported that boys tended to view games aimed at older children (18+) as the most desirable- the most interesting and challenging – and often felt under pressure from their peers to get and play on these sorts of games".

(Focus Group Research for the Byron Review)

7.76   There is also a lack of clear evidence on whether video games adverts are being inappropriately targeted at children. Data provided to the Review by the ASA relating to complaint figures from 2007, shows that concerns about video game ads were a relatively small proportion of their overall complaints cases (0.6% in 2007). Of the 87 complaint cases, only 10 were upheld by the ASA. Over half (57%) of the complaints relating to video games were about the depiction of violence and issues of suitability for children. Almost a fifth of these referred to concerns over promoting the use of weapons. In addition, of the 20 cases referring to video game adverts on the internet in 2007, 14 of them (70%) were not able to be investigated as they were in non-paid for space and thus out of the ASA's remit.

Improving the system for appropriate advertising of video games to children

There is a strong case for further research

7.77   It has been difficult to establish whether children are being targeted by inappropriate video game products through advertising and thus to properly assess whether sufficient controls are in place. However we do have powerful evidence of children wanting to play age-inappropriate games and of the pressure on parents to buy them. **I recommend that the Government should commission and oversee research to examine (1) if video games are**

being advertised responsibly, in line with age-ratings, and (2) the role of marketing in stimulating children and young peoples' desire to play video games which are not appropriate for their age. This research should be conducted in partnership with the advertising and video games industries, and in conjunction with the Government's assessment of the impact of the commercial world on children so that by Spring 2009 Government can take stock of the evidence and progress and encourage any further action.

Better co-ordination is needed between the different codes of practice in this area so that there is clear guidance for the industry

7.78   I have been impressed by the efforts that have been made to deliver responsible advertising to children through the ASA and the wider self-regulatory approaches. However, although the principles and intentions of these systems often overlap, they do not necessarily join-up effectively. Thus, in the light of the evidence on potential risks to children and the widespread lack of understanding that 18 rated games should not be played by them, I think more could be done to provide more coherent and detailed guidance to the video games and advertising industries on the appropriate content and targeting of video games adverts. This would be consistent with the approach to other products that have been identified as inappropriate for children (e.g. alcohol and foods high in fat, sugar and salt) and would present the chance to resolve discrepancies between the different codes and guidelines. Therefore: **I recommend that the video games industry and the advertising industry should work together to ensure consistency of approach between advertising self-regulation and the video games classification systems.**

7.79   The forthcoming reviews of the CAP and BCAP codes of practice provide a good opportunity to take this forward. **I recommend that that the advertising and video game industries, and those responsible for the classification of video games should work together to produce CAP and BCAP guidance on the advertising of video games.** This should collate rules and guidance from different codes of advertising practice to produce transparent and consistent guidance. In particular, attempts should be made to resolve the discrepancies in the following areas:

- **The granularity of codes and guidance relating to online game adverts as well as offline adverts, particularly in relation to ensuring appropriate target audiences:** the Committee of Advertising Practice (CAP) should develop the CAP Code guidelines on targeting to children, to define what is an acceptable percentage of an audience to be under the given age rating for the advertisement of 15+, 16+ and 18+ rated video games. This work will also need to take account of the results of the future-proofing of the self-regulatory system (see Chapter 4).

- **The granularity of codes and guidance relating to video games in comparison to other similar age restricted products:** there are currently no formal restrictions on the scheduling of adverts for age-rated video games. Therefore, in line with the scheduling restrictions on 15+ and 18+ rated films and videos, the BCAP code should specify scheduling restrictions on advertisements for 15+, 16+ and 18+ rated video games not to be advertised in or adjacent to 'children's programmes'.

- **The consistency of guidance relating to the labelling of age ratings on video game adverts:** although there are specific guidelines relating to requirements to display age ratings in paid-for advertising, guidance relating to the prominence of icons and descriptors is less clear for promotional websites. In addition, there is a lack of consistency in the requirement to display age rating icons and content descriptors for adverts of online games, and games that are awaiting classification. This work should establish a clear and consistent approach to the age-rating labelling of all video games across all media.

7.80   As a result of producing these guidelines, and to ensure a consistent approach, I suggest that the video games industry and those responsible for the classification of video games should amend their respective advertising guidelines and code of practice to be consistent with those produced in the BCAP and CAP Code Review. The Advertising Standards Authority should also ensure that the video games industry and those responsible for the classification of video games are kept fully informed of upheld adjudications relating to the advertising of Video Games so that further appropriate sanctions can be enforced by the video game industry (ELSPA/PEGI) under their own advertising codes of practice

Parental control mechanisms on gaming platforms

7.81   Children and young people play video games on a range of platforms including traditional games consoles, portable games consoles, PCs and on mobile phones. A recent survey of parents suggested that the vast majority of games were accessed through games console or PC game discs, with a small percentage (4%) accessing games on mobile phones (Microsoft/StrategyOne, 2007).

7.82   It is well established that platform manufacturers do not allow publishers to use their platforms for games that have not been classified by one of the recognised bodies in the UK (BBFC or PEGI). This, coupled with retailers not selling games without a rating, ensures that products outside the mainstream video game market are not given a legitimate platform in the UK.

7.83   In addition to this, the introduction of 'parental controls' or 'family settings' on gaming platforms has the potential to be a key part of the child protection strategy in relation to video games. They are an element on many recently released games consoles, including some portable consoles, and on new operating systems for PCs.

7.84   All parental controls are set by default to allow access to all levels of game content, and so have to be switched on by the user. The purpose of this is not to be prescriptive, but give parents the tools for them to make their own judgements and decisions about what kinds of video games their children play. Some parental controls only allow one level of setting that would apply to the whole platform, whereas others allow different levels to be set up for different users, so that a younger child can play with more restrictive access to games than an older sibling for example.

7.85   There are some basic 'standard settings' that generally apply to all parental controls. These allow parents to filter the games their children play depending on the age ratings given by the BBFC and PEGI, which are encoded into game discs. They also allow parents to determine whether their children can play video games online. Others go further and allow

parents to filter specific games and games with certain themes or words, or conversely allow parents to override the general filter and allow specific games they deem appropriate on a case by case basis.

7.86 A few gaming platforms also offer varying degrees of tools to help families reduce the potential risks of playing games online. These can include settings that enable parents to filter out online games without an appropriate rating; filter sites that are not PEGI-online licensed[5]; manage who children play games with; decide what type of communications are suitable, for example by locking off 'chat functions' for younger children; and controlling children's ability to make online purchases. In addition, one of the main gaming platform holders recently introduced a mechanism to allow parents to set various time limits for each child's usage.

Effectiveness of parental control mechanisms on consoles

7.87 At the moment, parental control mechanisms are not a feature of all gaming platforms. They exist on most of the new games consoles, but these are only just starting to penetrate the market.

7.88 It is not clear what the levels of awareness are for parental controls. Anecdotally, it seems that many parents are not aware that parental control mechanisms exist, and even fewer actually use them. For example, in the sample used for my focus group research none of the parents was aware of parental controls on consoles. Yet industry research shows awareness to be much higher with most parents being aware that controls were available.

7.89 Console manufacturers do promote family settings, age ratings and safe video game playing although lack of parental awareness about game content and how games are played means that there is not necessarily strong demand for these tools. However, there is nothing on the packaging of consoles that informs consumers that parental controls are available and have to be set up and it doesn't appear that parental controls on consoles are particularly promoted in retail outlets either. Similarly, when setting a console for the first time, there is not always something that prompts the user to set up the family settings, meaning the process can easily be by-passed or missed.

7.90 As with tools provided to parents by the internet industries, more could be done particularly by the video game industry to raise awareness and promote the use of parental controls.

7.91 A compounding factor is that there are considerable differences in the functions different platforms offer and the ways they operate. So, whilst there are platforms that are pioneering in this area and offer a very good standard of parental control tools, this is not the standard practice, and some do not offer a sufficient level of granularity or clarity to parents to help them use these tools as part their approach to managing their children's gaming.

7.92 In particular, some platforms do not have parental control operating systems that are clear, accessible and easy to use. This is clearly a key element in engaging parents, as described in

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5 PEGI-online is an extension of the voluntary Pan-European Rating Information (PEGI) rating system, which aims to set standards for online providers of video games (see Chapter 8 for more information)

the previous chapter on the use of internet controls. Some platforms do not prompt the user to set parental controls and it is difficult to locate the settings in order to do so. For instance, on many consoles, parents have to navigate several layers of information in order to access parental settings. The interface on some parental controls makes them difficult to use without referring to detailed instructions on a website or through trial and error. This becomes especially challenging when children are excited and anxious to start playing.

7.93   Responses to my Call for Evidence suggest that often the lack of engagement from parents when it comes to setting up games consoles is partly because children are usually more adept at doing it or know how to switch them off:

"some respondents said they knew how to 'get around' the filters as they had more computer knowledge than their parents"

(Children's Call for Evidence)

7.94   This means that children often set up consoles on their own and don't turn on the family settings.

7.95   Parental controls on consoles are an important element in the tools that are available alongside the classification system. Of course, they don't present a single answer – we know that when parents do set up parental controls some children will know how to turn them off. Ofcom research found that among secondary school children who were aware that their household employed security PINs to limit access to rated programmes, around half knew their parents'/guardian's number. I also recognise what a difficult task it is for industry to get the balance right between providing sophistication in the controls that can be set and not introducing undue complexity.

Improving parental controls and increasing awareness and use

7.96   In order to address the issues around parental controls, and improve the impact they have, we need to:

- raise awareness of the potential risks in order that parents understand the importance of parental controls;

- raise further awareness of their availability, including information and warnings on the packaging, on the product and through set up prompts;

- get the balance right between accessibility and ease of use and giving parents the tools they need to make more granular choices about the games their children play;

- base future developments in console parental control software on evidence and feedback from parents, children and young people.

7.97   In order to ensure parents and carers know that these mechanisms exist, and are encouraged to use them, the information campaign described above should include raising awareness of parental controls on consoles. For instance, I suggest this should include clear, prominent notices on packaging for games consoles, which informs consumers that parental controls are available; whether they meet any agreed industry minimum standards; and importantly, a warning that they 'have to be switched on'. I suggest similar notices are provided prominently elsewhere, for instance, on the product (e.g. stickers

across disc trays), or via in-store information at point of sale, including online. This is important to ensure that parents know to engage with the setting up process even when children are excitedly unpacking consoles and are anxious to start playing.

7.98   A number of responses to the review's consultation process called for parental controls to be 'switched on' as default, in a similar vein to those that asked for the pre-installation of filtering software on all PCs (see Chapter 4). Whilst this may appear to provide a solution, particularly if implemented in the short term to solve the low levels of awareness, it would not necessarily be proportionate, or the most effective solution. Some of the concerns with this kind of approach include:

● That this could be a disproportionate response, given that the average age of UK gamers is over 18.

● Some consumers may think that their console was 'broken' if they found that they couldn't play any games (apart from 3+) on them, leading to increased calls to help lines.

● It could be easily switched-off (including by children), which would do little to actually engage parents in managing their children's gaming.

7.99   There is a risk that if we go down this road parents will become used to consoles having parental control settings turned 'on' as default, and will perceive consoles as being automatically 'safe'. There is then the danger that parents will become, or remain, removed from the process and so won't engage with children to set up consoles. Nevertheless, more could be done to ensure that parental controls on consoles are consistently clear and easy to use no matter which brand parents choose. **I therefore recommend that voluntary minimum standards be agreed for parental control settings on gaming platforms.** This could be coordinated by ELSPA. I suggest these stipulate that in order to meet the minimum standards, consoles need to offer consumers the ability to:

● filter access by age classification of hard copy game disc. Where possible, this should include use of the age rating icons that UK consumers (i.e. BBFC & PEGI);

● block specific games on a case by case basis;

● lock off access to online play;

● filter access to hard copy game discs with no UK accepted rating; and

● over-ride general filters to allow specific games on a case by case basis.

7.100 Where possible, and where appropriate, I suggest that Industry also consider offering consumers the ability to:

- set filters for individual users;

- set time limits on game play;

- filter access to online games or websites (e.g. sites or games that have labelled their material as only appropriate for certain ages, or filtering solutions that recognise 'safe' online sites);

- manage of online communication;

- set personal settings that extend outside of the home; and

- filter access by 'themes' of games (e.g. by linking up with content descriptors).

7.101 In all cases, **I recommend that the option to switch parental controls 'on' should be part of the initial set up stages**, along with setting the time, date and language, which cannot be bypassed. In other words, it should not require seeking out through layers of other options, or concealed in a cumbersome manual, or rely on guidance that is only accessible online.

7.102 **I also recommend that standards are set in relation to how 'child proof' the controls are.** Such as, not showing pin numbers on screen when they are keyed in, and having to call a help line to return to the default settings, where age verification mechanisms are put in place. Or, not having systems that encourage parents to have passwords that can easily be guessed by children, or even simple reminders that parents should choose a password that children cannot easily guess. This could also incorporate periodical prompts to remind users to check that the controls have not been switched off.

7.103 As console manufacturers cannot prevent specific games being played on their platforms, and adult games are made for platforms which are normally marketed as products for children, **I recommend that minimum standards should apply to all main gaming platforms.** However, as the different platforms converge, and new gaming platforms enter the mainstream market (e.g. mobile phones), periodical consideration should be given to which other platforms should be included, or whether there should be different levels for different platforms with future reviews planned to take account of developments in gaming technology. I suggest that progress on this should be reviewed annually. Industry should also consider the development of a quality seal, similar to the BSI Kitemark™ developed for filtering software. (see Chapter 4). Industry representative bodies such as ELSPA should also look at ways to incentivise console manufacturers to consider child safety features, and should reward good practice in this area.

7.104 To ensure that developments reflect the needs of parents **I recommend that this work is supported by both awareness raising activity and independent parental satisfaction surveys.** Ideas put to the Review in this area include clear and prominent information on packaging that parental controls are available, whether they reach the industry minimum standard and a clear statement that they have to be set up as well as clear warnings on the product (e.g. a large sticker over the CD tray) with the same information.

Empowering parents, children and young people

The role of parents

Overall, the parents that responded to my Review felt that deciding what games were appropriate for their children ultimately had to be their decision based on their judgment of each child. This view was reflected in ELSPA's 2007 YouGov survey, where 95% of respondents believed that it was the responsibility of parents to monitor which video games their children play.

I have described how the video games industry and retailers can support parents by making them aware of the content of video games, or online game play, in order for them to assess the potential risks, so that they can make informed decisions. If my recommendations are implemented, I believe parents will be in the best position to do this.

However, there are some steps that only parents can take, which, backed by industry support should ensure increased safety for children playing video games both on and offline. Steps that parents need to consider are:

- Not all games are suitable for young children and some games are only suitable for children and young people above certain ages, so don't buy 18+ games for young children.

- Have the confidence to say 'no' if you do not think a game is appropriate for your child.

- Consider having games consoles and computers in a communal area, so you can monitor your children's use.

- Make use of the online information available at websites such as:

    – *www.asaboutgames.com*

    – *www.BBFC.org.uk*

    – *www.pegi.org.uk*

    – *www.pegionline.org.uk*

- Take the time to play games with your children, so you can see what they contain.

- Be alert to what children are doing (e.g. getting games from friends, or playing in other peoples homes) and let others who care for your children know about your rules when it comes to video games.

Local area network (lan) gaming centres

7.105 Children and young people also often play video games in gaming and internet centres, which can offer a more social gaming experience. Over 90% of 'Local Area Network Gaming Centres' are members of 'Interactive Gaming UK' (IGUK), the trade association of gaming centres in the UK. Members agree to promote gaming in a positive and responsible way by signing up to a code of practice which commits them to ensure that playing and viewing of video games with restricted age ratings is not permitted by persons under the age. Additionally, any advertising and promotional material should be appropriate for the target

age range of the products offered. Members of the centres also have to sign up to user codes of conduct governing standards around behaviour and encouraging reporting of inappropriate behaviour.

7.106 Very few centres offer 18+ rated games, but the ones that do tend to use a separate room with restricted access. Centres that offer other age restricted games have different ways for verifying children's ages. Some centres use compulsory membership schemes with monitoring software on clients' machines which only allows certain programs to be started if the member's account level permits it. Other centres rely on the vigilance of staff. I welcome these approaches to providing children with access to gaming in a responsible way.

Using interactive, game-based approaches for learning and development

7.107 Given that a large proportion of the audience for video games are children and young people, and this is a medium they are willing and eager to engage with, I fully support efforts to explore the opportunities for using gaming technologies for learning and development.

7.108 Educators have been interested in the potential of computer game technology to support learning for a number of years and recent surveys show that whilst there is not universal support there is a surprising level of interest in the use of games for learning (BECTA, 2007).

"Using technology develops dexterity and fine motor skills. Use of video games, for example, allows users to respond quickly and accurately. They can also benefit such things as eye hand co-ordination."

"Spatial awareness can also be augmented by such activities and will be shown as having improved in future years."

(National Association of Head Teachers)

7.109 Whilst the academic research in this area is not conclusive in demonstrating proven educational benefits, and video games may not be a suitable way of learning for everyone and in all circumstances, there do seem to be benefits in terms of motivation and many respondents to my Call for Evidence were extremely positive about the potential advantages of using game-based approaches in education and training environments.

7.110 Games can be used to support classroom activities in subjects such as science, engineering, English, and history. For example, games based on ancient civilizations may be used to support thinking about the consequences (and possible alternatives) of events in history; games may be analysed, like works of literature or film, for their significance in society; and games involving sports management may be used to support mathematics. Games can also be seen as environments for complex problem-solving, supporting concentrated attention, and for exploring imaginary worlds[6].

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6 Futurelab submission to the Byron Review

7.111   There have been various pilot studies in this area, and a growing interest from the games industry to tap into the educational potential of games. A number of guidance documents have also been produced to advise teachers about using games. Currently, there are a number of barriers to fully realising the potential of video games for learning, including:

- Little in-depth analysis of the impact of games on learning, and lack of proven evidence of benefits.

- The need for effective support materials and training for teaching practitioners, and practical difficulties in using software that is not designed for educational benefits or a classroom environment.

- The limited time available for teachers to familiarise themselves with the technology in order to take advantage of it.

- Resistance, or ambivalence of established institutions to be involved with 'games', and difficulties in some school stakeholders accepting potential or actual educational benefits of computer games.

- Difficulties in identifying relevance of particular games to learning outcomes set out in the curriculum, and verification that games are suitable.

- There is a lack of financial incentives for industry to develop bespoke software for a specific educational audience which may have no mass market appeal (i.e. where games design and technologies are used to 'inspire' or inform the development of new digital learning resources).

- Games designed for learning can be too simplistic compared to mainstream video games – repetitive tasks become like work, the range of activities is limited, and tasks do not support progressive understanding (Kirriemuir and McFarlane, 2004).

7.112   To help overcome these issues, more dialogue between games developers, educational resource developers and educators is needed. This would help identify more benefits and opportunities. Despite the disparity in developmental costs, bespoke educational games could have a longevity that commercial games may not (ELSPA, 2006). In addition, there could potentially be considerable benefits from using online games in distance learning.

7.113   There may also be benefits for providing personalised learning solutions for children and young people who either have difficulties accessing traditional learning methods, or may have specific physical or sensory needs. Responses to my Calls for Evidence suggested that some innovative developments in game interface design could actually support some accessibility needs, although this is often a side benefit rather than a key consideration (BECTA). The importance of this was highlighted in my children and young people's Call for Evidence:

"… deaf children often enjoyed video games instead of television as they did not have to try to keep up with the subtitles in a game"

7.114   Use of mainstream games in the curriculum remains rare. However, there may be potential for children and young people to benefit from any future learning opportunities in games where evidence can be provided on the advantages of game-based learning. I therefore suggest that research continues to be done in this area and that approaches based both on the use of mainstream games and games-based learning products specifically designed for

education continue to be developed and tested. **I recommend that Government supports dialogue between the games industry and the education sector to identify opportunities for the benefits of game-based learning to be evaluated in different educational environments.**

7.115 To achieve this and develop recognised benefits from gaming, video industry experts, educational resource developers and educators need to continue the dialogue and experimentation in this field to explore learning techniques and interactive learning solutions.

> **LearnPlay foundation's 'Game to Grow' project**
>
> Video game technologies are also used as a learning tool for reaching children and young people who may have difficulties in traditional learning contexts. The LearnPlay Foundation's 'Game to Grow' project uses COTS (commercial off the shelf) games and hardware, and incorporates them into educational programmes to engage a broad range of children and young people, some of whom are at risk of social exclusion (e.g. people with learning difficulties, unemployed people), with the aim of building confidence, collaborative skills, communication, team building and leadership skills as well as hard skills such as literacy and numeracy.
>
> Feedback from participants suggested they had improved and acquired new skills during the project. It was also felt that use of games in this environment helped to address social inclusion.

7.116 Based on any future evidence of demonstrated learning outcomes, consideration should be given to the development of an independent accreditation scheme for game-based learning software. Consideration of games-based learning resources needs to be part of a broader approach to the development and evaluation of digital learning resources. This would ensure consistency in addressing agreed educational outcomes (e.g. numeracy, literacy, and problem solving skills) aligned with Government objectives. This would also enable practitioners to make informed choices about using games in the classroom, and help parents choose games for their children based on positive learning outcomes as well as classification. Evaluation or guidance frameworks may also help games developers who are interested in educational opportunities identify ways in which games may be designed to support learning.

Competition runner-up:
Mo Montgomery-Swan, age 12/13

Chapter 8

Online Gaming

8.1 Most gaming platforms, including PCs, the latest generation of games consoles and mobile phones offer online connectivity. A relatively new but growing phenomenon amongst children and young people, online games present new and different kinds of opportunities and potential risks to games played offline. Many of these are similar to the benefits and risks of internet use generally, as online gaming merges issues of content, contact and conduct online. With its changing nature and the possibility for user generated content, it is equally difficult to regulate.

What Is Online Gaming?

8.2 An online game is a digital game that uses a live network connection in order to be played, which usually means the internet. So, this includes games played on the Internet, from simple games (e.g. puzzles or word games) to Massively Multiplayer online role playing games (MMORPGs) like World of Warcraft, but also those played online through consoles, across mobile phones or via peer-to-peer networks. The online element of gaming is still relatively new, however, its popularity is increasing with Internet access and readily available broadband technology and it is predicted to expand dramatically in the next few years.

8.3 The ChildWise Monitor Report (2008) showed that video games are among the top favourite online activities for children and young people across all age groups. For example, 47% of boys aged 7-10 use the internet to play video games . For the youngest children games is what the internet is all about, and they will seek out and play a variety of games, often revisiting old favourites. Interest in online games falls off from age 12 – just 20% of 13-14 year olds, and 7% of 15-16 year olds, played games at their last online session. The study also showed that around 15% of children have online access via a games Console, an increase of 4% since 2006. Access via a console also increases with age, with 34% of boys aged 11-16 having online access via a games console.

How do children play online?

8.4 Online gaming is usually done through a games console, a portable gaming device or a Personal Computer. PCs and the current generation of games consoles (including portable consoles with wireless connectivity) allow players to create an account and connect their consol to the internet. Players either buy games from high street or online retailers, or download games digitally online. Games can then be played online with other players who have the same set up. On consoles, this is generally done via console manufacturers' central servers which are customised for the specific console. There are number of online PC Game

hosting websites in the UK, where players go to meet other players; play games, enter competitions & chat on forums etc. When playing games online via a PC, players can pick a server and close it off to other gamers, or they can play on an open network, which allows other gamers to see their profile, and make contact with them.

Massively Multiplayer Online Roleplaying Games (MMORGs)

8.5   MMORGs are one type of online game, usually played via a PC but some can also be played via games consoles. Typically, these games present three-dimensional virtual worlds in which thousands of gamers assume the roles of fictional characters ('avatars'). They tend to provide a more open-ended approach to gaming, and are notable for their social nature and community aspects that surround game play. They differ from other online games in the large number of concurrent players participating in a single game and the persistent and immersive nature of the games (i.e. play continues whether a particular gamer is participating or not). A recent survey suggested that 25% of players of massively multiplayer online role-playing games are under the age of 18, most players play with somebody they know in real life, and that on average players spend 22 hours a week in the environment.[1]

Risks and benefits of online gaming

What are the Risks?

8.6   The incorporation of the internet into gaming presents various and potentially quite serious challenges to the established regulation of video games as outlined in the evidence in Chapter 6. The risks involved in online gaming generally reflect the risks of going on the internet more generally. As such, much of the attraction and benefits of online gaming, such as playing somebody you don't know, can be the very things that can create the potential risks. They include issues of – content; contact; conduct; and excessive use.

 For example:

- **Content**: Not only 'static' content which the commercial developer created, which can be reliably rated, but also potentially inappropriate material that is user generated – therefore less controllable and which can evolve, making games ratings not wholly effective. In addition, users will be increasingly able to use games devices to share and create content, some of which could be age inappropriate or offensive.

- **Contact**: Giving away personal details, for example, through instant messaging & chat functions when playing games with players that you meet online and don't know in the real world. This has the potential to lead to incidents such as grooming and cyberbullying. Also, links to other sites & adverts that may not be appropriate.

- **Conduct**: Of children themselves and of other, often unknown/anonymous players (e.g. racist; sexist or other abusive or threatening comments, or bad language) that may be inappropriate for younger players.

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1   Yee, 2006 (From David Buckingham's Literature Review)

8.7   Many gamers told me that it is not unusual for them to be exposed to inappropriate language, racist comments, or other verbal abuse when playing online, or for gamers to gang up on another gamer to prevent them progressing in a game[2]. This is a point that is further illustrated by a recent poll of online gamers, where 87% of respondents said they had experienced conduct from other players (e.g. bad language or abusive comments) which they would deem inappropriate for children or young people under 18 to encounter, compared with 10% who said they had not (TNWA poll, 2008). However, gamers also told me that it is usually the younger players who use bad language and threaten each other, whilst older players tend to use the mute options more and ignore the younger players. Some children are also concerned about inappropriate conduct though:

"If people were swearing on the other end [when playing an online video game] and this came through on my TV, my younger brother and my parents would be disgusted; and I would NOT be impressed either".

(Children's Call for Evidence)

8.8   Some respondents to my Call for Evidence said this was a particular concern for online gaming via consoles and handheld games devices. These are more likely to be owned by children, are often located in their bedrooms, and can be taken outside the home, which makes supervising and monitoring their use more difficult. However, others felt more concerned about online gaming via PCs, where there might be more potential to encounter inappropriate content, contact or conduct on an open network.

Excessive Use and Opportunity Costs

8.9   The open-ended, social and goal-driven nature of some online games, (Ahn and Randall, 2007; Becker, 2002) raises certain concerns in relation to excessive use and the potential for addictive behaviour. This is because online games, particularly MMORPGs differ from other games in their persistent and immersive nature. For instance, a recent survey suggested that on average children with Internet access in their own room play video games for slightly longer than those that don't, possibly because of the popularity of online gaming[3].

8.10   Involvement in gaming does not necessarily mean an inactive lifestyle. For instance, the same survey showed that children who are actively involved in sport play on consoles for the same amount of time as those who are not[4]. However, the varying degree of high commitment required of some MMORPGs for example, results in less time for other activities, or affect real world relationships.

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2 Games responses to Call for Evidence
3 Childwise Monitor Report
4 Childwise Monitor Report

> **Online gaming and excessive use**
>
> In a recent study which looked at the kinds of problems young people encounter through too much playing of computer games, in particular a popular MMORPG, young people reported a number of impacts from excessive gaming. These included their eating habits being disturbed, staying up late at night due to the global nature of the game that cut across time barriers, encountering problems at school, and sometimes not having time for such everyday tasks as personal hygiene. The young people interviewed said this led to rows with their parents and their friendships and relationships also suffered.
>
> Players in the same study talked about what drives them to play for so long. These include different social pressures, such as feeling left out when playing is linked to friends and classmates outside the game, or feeling obliged to adapt to the playing habits of others to keep up. The game design and mechanisms which call for playing with other users, playing for long periods of time, and not being able to pause a game without disrupting game play were also seen as contributing to longer play.
>
> Living in World of Warcraft – The thoughts and experiences of ten young people (2007)

What are the Benefits?

8.11   There are numerous benefits to being able to play video games online. These came through strongly in my research and through my Call for Evidence, often reflecting the benefits of the internet in general. Online gaming has challenged the notion of games as isolating and alienating, focusing instead on the sociability of these environments (Taylor, 2006). They enable children to play with friends, family, or people they meet online, whether other players are just down the street, or on the other side of the world. Often, they can communicate in real time, either through instant messaging or via "chat" functions, using a microphone and headphones. They provide a social tool which offers another opportunity to meet new people and interact anonymously and openly, which can help with identity exploration in adolescents (Lee and Hoadley, 2006).

One of the reasons I enjoy playing video games online, is that I can interact with people from all over the world and make friends. Most online games have groups of players working together to complete objectives, which can improve team and leadership skills, or just for socialising while playing the game. Some of my best friends are online ones.

(Children's Call for Evidence)

8.12   There is also excitement about the learning potential of these games and many responses to my Call for Evidence referred to the experiences of running 'guilds' or 'clans' (teams of characters within a game) as potentially reflecting managerial & social skills required in the real world. In addition, one clear thing that came through was that online gaming is an important part of the lives of many children and young people with specific accessibility needs as they offer a platform where players enter into the arena on a level playing field. For example, children with disabilities who might otherwise need supervision from a carer in many other real world activities.

Existing arrangements for managing the risks of online gaming

8.13   A number of different approaches are currently being taken to help manage the risks of online gaming. These include:

- Labelling and age-rating of online games;

- Restricting access: through parental controls on consoles and PCs, and age verification systems;

- Moderation, including incentivising good behaviour and enabling reports of abuse.

Labelling and age rating online games

8.14   The current age ratings and accompanying information descriptors are also used for games that can be played online. One difference is that games provided purely online (e.g. where there is no physical disc) do not fall within the statutory classification as set out in the Video Recordings Act, so games with extreme content rely on being voluntarily rated. However, at present, these games are generally not produced for adult audiences, and where they are, they are voluntarily classified.

PEGI-Online

8.15   PEGI Online is a new addition to the voluntary European PEGI system. It is intended to help consumers understand and manage the potential risks within the online gaming environment. There are two consumer facing elements to PEGI-online. In addition to the traditional content age ratings and descriptors, if a hard copy game has online capability (and has been rated by PEGI) it will carry an additional 'PEGI online' logo on the back of the packaging. This is to advise consumers that it is possible to play the game online, which may create different risks than if it were played offline, as outlined above. In an effort to prevent confusion, the PEGI-online logo does not appear on games that have been rated under BBFC.

8.16   The PEGI-online system also licenses 'online game play service providers' that meet certain requirements and standards. Licensed sights will carry a similar 'PEGI-online' logo (the packaging logo with the addition of a licence number). This logo is designed to inform consumers that the site has been licensed by PEGI-online, and is therefore obliged to keep the website free from illegal and offensive content created by users and any undesirable links, as well as taking measures to protect young people and their privacy when engaging in online gameplay.

PEGI Online Safety Code

For online game play service providers to obtain PEGI-online licences, they must sign up to the 'PEGI Online Safety Code' (POSC), the main provisions of which are that:

- **Age ratings** – Only games with recognised age ratings will be included on a site

- **Reporting** – Appropriate mechanisms are in place for players to report undesirable content, including on any related websites

- **Content removal** – Licence holders will use their best endeavours to ensure online services under their control are kept free of content which is illegal, offensive, racist, degrading, corrupting, threatening, obscene or which might permanently impair the development of young people

- **Privacy** – Licence holders collecting personal information will maintain effective and coherent privacy policies in accordance with European Union and national Data Protection laws

- **Community standards** – Licence holders will prohibit user generated content or conduct which is illegal, offensive, racist, degrading, corrupting, threatening, obscene or which might permanently impair the development of young people

- **Advertising –** A responsible advertisement policy must be in place (see section on advertising)

BBFC online

8.17   The BBFC are currently piloting a voluntary, membership based scheme for classifying online video games and managing the associated risks. The scheme broadly mirrors the PEGI-online system in most respects, including scope and licensing framework – whereby licensees sign up to a set of 'rules' in order to secure a certain level of safety in online game play. There are some proposed differences around its procedures to deal with changes to games post-classification (e.g. where new characters or storylines are added); independent monitoring of members' sites; labelling and content information; and reporting mechanisms. The scheme is due to launch in May 2008.

Access to online gaming

8.18   There are a number of mechanisms that can be used to manage children and young people's access to game playing online:

- **Parental Controls:** As described above parental controls on PCs and the latest generation of games consoles can give parents the tools to manage the level of children's access to online gaming – for example, by not allowing it at all, or controlling who they can play with; or deciding whether chat functions are allowed etc.

- **Age verification:** In addition, where content is provided that may not be suitable for some children and young people, games websites often put systems in place for users to register their age. This is often by asking the player to key in their date of birth. Some sites try to incentivise children to tell the truth about their age by putting *upper* age limits on accessing certain material or linking access by under-18s to real world networks such as schools. Others require the user to register using a credit card.

- **Community approaches to managing risks:** Typically, most online gaming hosts require that players sign up to user 'codes of conduct' governing basic interaction in games and on forums. Whilst they differ from game to game, there are some fairly standard elements, and usually include agreement for players not to:

  - threaten other players;

  - communicate players' real world information;

  - use or post links to sexually explicit, abusive, obscene, hateful or offensive imagery, language or other content;

  - violate any laws;

  - modify official sites.

8.19   In addition, players often set their own codes of conduct that are relevant in their own gaming environments. To a large extent this kind of community moderation and management approach is similar to that used on social networking and other user generated content site discussed in the previous chapters.

Moderation and reporting

8.20   In order to address non-compliance with player codes when it occurs and to minimise some of the potential risks involved in online gaming, most game website hosts offer some level of moderation. This can be in the form of in-game moderation (e.g. when a moderator appears as a character in a game, or when tools are used to detect inappropriate material), out of game moderation (e.g. responding to reports from users), as well as moderation of associated forums.

8.21   Online game hosts employ different techniques in order to identify content which may be inappropriate. These include using automated filters that recognise key words and phrases and blocking of inappropriate content such as email addresses, passwords and offensive language. Some also include mechanisms such as pop ups that remind users not to reveal personal information while they type. This content is then flagged for the attention of the sites moderators.

Effectiveness of existing arrangements for managing the risks of online gaming

Labelling

8.22   In relation to labelling, both the PEGI and the proposed BBFC systems are a welcome addition to the traditional age classification systems and information on physical games packaging. Neither is well established and as such it would be difficult and unfair to judge

their overall effectiveness at this time. However, it is clear that progress needs to be made in this new and fast growing area to manage risks of online gaming.

8.23   For instance, from our focus group research it was clear that parents feel more out of touch with online gaming. They are unclear about when a game can be played online and how it works, or of the implications for children. A number of respondents said that it is not always clear what the age ratings are for games that are accessed online, and young people also think the system could be clearer:

"I think this could be clearer defined by what kind of changes are allowed to be made... more knowledge of how someone is able to customize a game and how that would affect others would be a good idea".

(Children's Call for Evidence)

8.24   Given PEGI-online is still relatively new, it is perhaps not surprising that it is not well known, but given the predicted growth in online-gaming, this low level of awareness should be addressed as a priority. As the logo only appears on the back of the box, this 'warning' is not immediately clear to consumers, particularly when games are purchased online, where the reverse of the packaging is not always shown. Nor is this warning explicit. In addition, there may be a risk that having the same, or very similar logos on boxed products and websites hosing online gaming, may cause confusion amongst consumers, however, no research on this has been done.

8.25   Given the confusion around the dual system for ratings on physical game products, I am also concerned that having multiple systems for rating online games and managing the risks of online gaming may only maintain the current confusion as more games are accessed and played online.

Access

8.26   Broadly speaking, it can be quite easy for children and young people to access games online that are not appropriate for their age – both in terms of buying and playing. Clearly, asking players to type in their date of birth relies on players telling the truth, which has obvious limitations. Similarly, requiring the user to register using a credit card is not foolproof (see Chapter 4).

8.27   Many gamers told me that it is not uncommon to play online in servers with both children and adults. For instance, 91% of respondents to a recent poll said they had played a video game online with somebody they believed to be younger than the age rating of the game, including 64% who said this happened 'often'. This compared to 6% who said they had not (TNWA poll, 2008).

Community approaches to managing risks

8.28   Respondents involved in hosting online gaming say the number of people reporting 'inappropriate behaviour' is relatively low. This may be partly due to a general reluctance to report fellow players. It may also be because there is a certain level of what might be classed as 'mildly inappropriate behaviour', not dissimilar to playground banter especially

amongst younger players. This may be accepted in the gaming community, although it might not be appropriate for some very young children.

8.29   Some games actively seek to promote good behaviour, by incentivising players or warning offenders and outlining punishments for re-offending, which can range from fines and temporary suspension to termination of gaming accounts.

"The game that I play has an automatic filter for bad words and has an option to be a secret agent where you make a promise to report people with bad behaviour and who share personal information."

(Children's Call for Evidence)

8.30   This builds on the idea many gamers put to me, that players value and rely heavily on their online identity and reputation and it creates a serious disincentive to do anything that might jeopardise this (for example, being banned from a site because of bad behaviour and having to build up a new identity and reputation). But some gamers argue that certain schemes designed to give players ratings do not always work as gamers can manipulate the outcome for their friends.

Moderation and reporting

8.31   Overall, the different kinds of approaches to monitoring are useful in managing the risks of online gaming, but implementation across different sites is variable, and there are differences in mechanisms for reporting.

8.32   The immediate nature of gaming online, and the fact that tens of thousands of gamers are often playing concurrently, or chatting on forums, means moderating everything as it is happening is simply not practicable. Technical tools that identify potentially inappropriate content and flag it for attention of a site's moderators can be useful in managing the risks of online gaming. They are particularly helpful for games targeted at younger audiences, but they have limitations as savvy players learn to outsmart them. Moderation therefore tends to rely heavily on users self-policing their gaming communities and reporting inappropriate content, contact or conduct through official reporting channels.

8.33   There were different views from gamers on the current levels of in-game moderation, with 43% of respondents the TNWA poll saying they thought these are very effective, or quite effective in preventing children and young people under 18 being exposed to inappropriate material. This compared to 49% who thought they were not effective, perhaps indicating the disparities between how the different games and sites approach moderation.

8.34   Similarly, there are differences in the reporting mechanisms sites offer, with only some games offering 'abuse buttons' that are readily available on screen throughout the game, and prioritising reports of inappropriate behaviour. Many others require players to visit a separate part of a website, outside of the game, to fill out a form with personal details, details about the incident, and relevant evidence (e.g. a 'screenshot') in order to submit a report. This is often the same process that is used for reporting other things like bugs; cheating etc.

8.35 Many of those that responded to the review said that in some cases mechanisms for reporting inappropriate behaviour could be made more accessible. In particular, results from TNWA's poll (2008) of online gamers illustrates the variability between users perspectives of the current systems, with 52% of respondents saying the various systems for reporting are either very well signposted or usually well signposted, compared to 39% who say they are not. In addition, 62% of respondents say reporting systems are either always or usually easy to use, compared to 18% who said they are not. Some users said it could take a disproportionate amount of time, and relies on users remembering a number of details sufficiently to be able to make a report. There is therefore a risk that this can contribute to discouraging reporting especially amongst younger players.

Mobile gaming

8.36 Mobile phone games represent a relatively small number when compared to the retail market for traditional video games, but there is potential for further growth as the technology advances. Most existing mobile games are perceived to be relatively innocuous with much lower levels of violence than console games due to the smaller screen size, which limits the graphics. In addition to this, production of mobile games is very expensive and in order to reach critical mass, game providers do not want to restrict their games to a limited audience.

What are the risks?

8.37 Whilst the risks in mobile gaming are low due to their generally more mild nature, the potential risks specific to mobile phone games as advances are made in technology are likely to be similar to those for other mobile gaming devices, and increasingly, platforms that allow online connectivity. There are also potential risks in location based gaming, whereby games are played over a defined geographical area. Using location information supplied by mobile networks, players can be challenged to find each other or specific locations in the game[5]. Here there is a possibility of children playing against adults that are not known to them.

Existing arrangements

8.38 To date, mobile games have not generally been classified under the PEGI or BBFC systems, as the cost of classification is not seen to be justified. However, mobile phone games are subject to the mobile phone content regulator, the Independent Mobile Classification Body (IMCB). Under IMCB rules, content (including games) is either unrestricted or suitable for over eighteens only. There is no staggered age rating system, but the intention of IMCB is that their classification framework is consistent with the BBFC & PEGI rating systems for 18+ games (see Chapter 3 for more details).

8.39 If content in games is classified as suitable for over eighteens only it is placed behind access controls until customers verify they are 18 or over with operator. Video games accessed via the internet or WAP, where the mobile operator is providing connectivity only, falls outside IMCB's remit and classification framework, as are user generated content and chat rooms.

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5 Mobile Broadband Group response to Call for Evidence

Effectiveness of existing arrangements for managing risks of mobile gaming

8.40   Not many games are downloaded from the internet onto mobile phones at the moment. Figures from M:Metrics[6] show that of those that own a mobile phone, 29% have played mobile games; 11.3% have played downloaded mobile games, and 4.8% have downloaded mobile games themselves.

8.41   At present, there is no real market for 18+ games for mobile phones and the do not appear to be made. Therefore, there is no perceived demand for further classification in this area. However, advances in technology over the next couple of years, particularly in convergence of hardware platforms, are likely to see the situation change. Sony PSP's recent addition of 'Skype' illustrates this.

8.42   The mobile operators' code of practice aims to ensure that children are not introduced via location based mobile games to adults that are not known to them. To the IMBC's knowledge, the code has been successful in this objective, but the number of players is currently low.

> **French Internet Forum (Forum des droits sur l'internet)**
>
> The French Internet Rights Forum is a private body supported by the French government, which brings together Internet stakeholders to discuss and suggest the rights and duties of users of the Internet. In November 2007, the forum made a number of recommendations about online video games, some of which, if accepted, would apply across Europe. They included:
>
> - Information and awareness raising campaign about PEGI-online, with improved visibility on packaging & download pages
>
> - A website for parents and teachers about the risks of online gaming
>
> - Games should be rated by PEGI in France, with a new 'advisory commission' checking the ratings are consistent with French society's expectations
>
> - Games which allow chat functions (either text or verbal) should not be rated 3+ or 7+, and can only be rated 12+ if the game is moderated.
>
> - Encourage full moderation 'in principle' for games targeting minors (with financial help from public authorities).
>
> - On-screen reporting buttons
>
> - Age ratings should apply to in-game advertisements, and publishers should put warnings on packaging if an online game contains adverts.
>
> - Game downloading screens and login windows should be used to inform players of most relevant parts of their 'User Licence Agreements'
>
> - 'On-screen timers' should let players know how much time they are spending online per session, and encouraging breaks, and MMOGs aimed at young children should incorporate tiredness of characters when users are playing for too long

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6   Provided by the Mobile Entertainment Forum

Managing the risks of online gaming: recommendations

8.43   Clearly a lot of attempts are being made to make online gaming safer for children. In particular, I welcome a number of recommendations recently made the Forum des droits sur l'internet. But more consistency is needed across these different approaches and greater clarity for parents on how they can judge what online games their children should play. **I therefore recommend:**

- **BBFC and PEGI should work together to establish a single set of standards managing the risks of online gaming.** This more streamlined approach should:

   – Build on existing practice under PEGI-online and proposed arrangements for BBFC online

   – Be transparent and help parents manage the potential risks in online gaming to ensure that the existing confusion is not exacerbated by the increasing move to an online environment

   – Ensure ratings of online games are consistent with any future developments in the classification of hard copy games where possible.

- **BBFC and PEGI should also work together to ensure that where video games have online chat functions, this should be taken into account during classification, along with the proposed level of moderation. In particular, I suggest that games which allow messaging should only be rated 3+ or 7+ if there are appropriate levels of moderation.**

8.44   Given the risks of online gaming reflect many of the same issues as going online generally, it is important that the emerging online gaming industry shares expertise with other parts of the internet industry such as social networking sites and hosts of user-generated content. In line with my approach to these issues on the internet, **I therefore recommend that the UK Council for Child Internet Safety convenes a sub-group of the online gaming industry and online gaming regulators to explore good practice in child safety for games played online,** which can be reflected in online schemes developed by PEGI and the BBFC. In particular I suggest the group looks at:

- **Awareness Raising**: As part of the wider awareness raising campaign for video games, the group should consider the best way to ensure parents and children are aware of and understand the online classification system(s), the general risks of online gaming, and how to minimise those risks using the online scheme(s). Given the current low levels of awareness amongst parents, I suggest this includes prominent notices on the front of games packaging, or during the online buying process where games have online networking capabilities – clearly informing consumers of this fact and directing them to further information. Age ratings for online games should be more prominent and consideration should be given to incorporating static flash screens at the beginning of online games with audio warnings about the age rating.

- **Age verification**: Ensures that industry continue exploring good practice in age verification mechanisms, and ways to incentivise children to register their correct age. I suggest that age verification mechanisms should be encouraged in games rated 12+ and over.

- **Informing Players of Risks**: Facilitates the sharing of good practice on the best ways to minimise risks for players e.g. mechanisms to ensure players do not give out personal details.

- **Player Responsibility**: How best to ensure that players are aware and are reminded of their responsibility to behave appropriately when gaming online, including through incentivising good behaviour through awards. I also support the French Internet Forum's recommendation that game downloading screens and login windows are used to remind players about particular elements of the 'User Licence Agreements' they have to sign (e.g. in relation to banned language; inappropriate content etc.).

- **Reporting**: How to ensure that players are aware of their role in self-policing online communities, that there are incentives and encouragement to report inappropriate behaviour, and that players are given the tools to do this effectively. This includes reporting mechanisms being made more accessible and in some cases, easier to use (e.g. being able to obtain evidence easily), with a clear 'warning' system for persistent offenders, and sharing good practice in using reputation management systems to prioritise reporting (see Internet, Chapter 4).

- **Excessive Use**: In terms of MMORPGs or other games which may encourage extensive game play, I support the French Internet Forum's recommendation that encourages the use of on-screen timers to let players know how much time they are spending online per session, and encouraging breaks, and for games specifically aimed at young children, consideration of incorporating tiredness of characters in new games.

- **Monitoring of online safety**: the sub-group should ensure that the effectiveness of online schemes for rating games and managing the risks of online gaming is closely monitored; that licensees or members of such schemes comply with them; and breaches of codes are dealt with appropriately. They should also monitor the proportion of online gaming service providers signed up to their codes of practice.

- **Mobile Gaming** – In the anticipation of advances in mobile phone technology, and mobile gaming products being widely adopted by consumers, mobile operators and those representing mobile entertainment should be represented on the internet council's online gaming sub-group

Empowering Children

8.45   Children and young peoples' technical skills do not always mean that they have the ability to identify, assess and manage risks. Given that often children's first experiences online involve game playing **I recommend that as part of the wider information & education strategy for the Internet, attention should be given to helping children and young people become accustomed to the risks of online gaming and how to deal with them, by raising awareness that risks inherent in the internet can be present in the online gaming environment.** Children should be encouraged to develop responsible online gaming behaviours from an early age and empowered to stand up to peer pressure to play games that may scare or upset them and just say 'no'. And, as with the internet more generally, children and young people should be supported to discuss any anxieties they may have with a parent or carer.

'Gamesmart'

Picture a scene; your child comes running up
to with a game that has an 18 on it. What do you
do? First of all, always read the box, don't naturally
assume the game is Ok as it's just a game or its morally
dubious, neither are true. Also, if you have concerns,
research is key, find out what the game is about, always read
the back as most games have a description of content and, most
importantly, talk to your child, find out why they want it, and
see if a more suitable alternative is available.

Also, encourage them to talk about their games and what they
actually do in them, communication is great in anything and
its criminal to neglect it here as well, so find out what they
have to do, watch what they do and play for yourself to get
a feel of it. Just like music and movies, games aren't just
for children, many are designed for adults and mature
audiences, so playing and seeing this first hand is
the best way to make sure your child isn't playing
anything inappropriate.

Ben Tyrer, 16

Over 13s competition winner

Chapter 9

Conclusion

9.1   We are a society preoccupied with parenting. Information and advice for parents exists in many forms and across all media. Most parents want to parent their children as well as they can and will take active steps to seek out approaches to enable them to do the best they can for their children. They want to give their children the best start in life by ensuring that they are healthy, happy, cared for and educated. For parents an area of great concern is around harm coming to their child. Indeed such parental anxieties can be fuelled by news stories that contain graphic details about children being abducted, harmed or killed. Some commentators have speculated that increasing parental anxieties are significant factors in the way restrictions are placed on children's freedoms – for example, in the way children's play has been significantly curtailed by parents who fear letting them outside. We are creating a parenting atmosphere where there is a 'zero risk' policy (Gill, 2007).

9.2   The safety of children should be a central concern for parents and society as a whole. However, our concerns, and our response to those concerns, must be proportionate. It is difficult enough to keep a balanced perspective on the safety of a child in the 'real world' – the offline space – but at least here, parents are familiar with the risks and can use their own experience to help their children learn to identify, assess and manage those risks. When it comes to understanding the digital worlds that their children inhabit many adults feel out of their depth and so either don't engage or become so anxious that they over-control their child's behaviour.

9.3   Parenting a child is a difficult task and is fuelled by emotion that can sometimes result in a less than rational approach to dealing with difficult situations. This task becomes even more difficult when we are facing situations that we feel we don't understand and worse, our children know better than us. In order to feel effective as parents in the digital world we need to be supported and empowered to learn about our children's experiences and make judgements about how we want to protect them from possible digital risks. We need to also think, as a society, about those children who are even more vulnerable because they do not have adults concerned about their welfare to guide them through these new media waters.

9.4   There are also steps that need to be taken in the UK and on a global platform to make the waters of new technology easier to navigate safely. This is about providing children and their parents with the proper tools, clear standards and signposts and somewhere to go when things go wrong. Crucially, this needs to be underpinned by action – such as that taken by CEOP and the IWF – to tackle the most serious risks on the internet.

9.5   The sphere of new media is sometimes described as being like the 'Wild West' – a landscape populated by cynical, selfish characters with no regard for the welfare of children. I have not found this to be the case. Throughout the internet and video games industries, Government and regulators, the law enforcement community, the charitable and voluntary sector, and the world of education and children's services there are countless individuals committed to supporting children and parents to deal with the risks that new technologies may present.

9.6   However, sometimes efforts to make the landscape safer for children are hindered, slowed or frustrated by the anxieties of different groups who do not understand each other's perspectives or question each others motives. In such a situation, where people feel the need to take sides and fight their corner, there can be no clear winners, only losers – most significantly, children and their parents.

9.7   I believe that alongside new technology we need a new culture of responsibility, where all in society focus not on defending our entrenched positions, but on working together to help children keep themselves safe, to help parents to keep their children safe and to help each other support children and parents in this task.

9.8   In order to make progress towards this goal against a context of technological and social change, I suggest the following indicative timescale for implementing the recommendations in my Review. This timescale will of course depend on further detailed work by Government and by the UK Council for Child Internet Safety.

The Internet	
By Spring 2009	UK Council for Child Internet Safety established by and reporting to the Prime Minister is in place with properly resourced secretariat.
	First Child Internet Safety Summit: Council publishes full strategy.
	Timeline established and underway for implementation of specific recommendations.
	Public information and awareness campaign underway, including establishment of 'one stop shop'.
	New secondary school curriculum in effect. Review of primary curriculum concluded.
	Measures to improve e-safety capacity of schools and children's services in place.
	Ofsted produces snap shot report on e-safety in schools and long report on ICT includes review of e-safety.

The Internet	
By Autumn 2009	UK Council for Child Internet Safety, established by the Prime Minister, has made progress on: ● Code of practice on moderation of user generated content produced. ● Kitemarked filtering software on all computers sold for home use and given away with all new internet connections. ● All major search engines put safety settings in a prominent place and give users options to 'lock' safe search on. ● Action plan for supporting vulnerable children online. Government to consider the work of the advertising industry to 'future proof' the current regulatory system, especially in relation to digital advertising, in the light of the Government's assessment of the impact of commercialisation on childhood.
Spring 2011	Success of UK Council for Child Internet Safety reviewed. Joint Chief Inspectors' Review of Safeguarding includes assessment of children's internet safety.
After Spring 2011	Government considers future approach in light of Review. Ofsted considers specifically reporting on e-safety in all schools in light of evidence.
Ongoing	Council reviews the need for new or updated industry codes of practice. Work to expand e-safety provision through extended schools. Rolling programme of research and engagement of children and parents to inform policy. Ofsted evaluates schools performance on e-safety. Work to implement Staying Safe: Action Plan promotes Becta's LSCB toolkit. Children's Workforce Action Plan reflects e-safety training. Advertising industry works with media owners to raise awareness amongst advertisers of CAP Code obligations. Council keeps this under review.

Video Games	
By Autumn 2008	Consultation on changes to classification system underpinned by clear plans for potential legislative change.
	Industry commits to develop minimum standards for parental controls.
	Campaign to raise awareness of age ratings and parental controls underway.
	Retailers make improvements to in-store information.
	UK Council for Child Internet Safety establishes sub-group on online gaming
	Industry and classification bodies commit to develop single set of standards for managing safety in online games.
By Spring 2009	BBFC and PEGI agree and publish standards for managing safety in online games.
	Research into role of video game advertising on underage game play completed.
	Industry guidelines on advertising of video games produced.
Summer 2010	Changes to classification system in place.
Ongoing	Monitoring and enforcement of sales of age-rated video games.
	Government identifies ways for game based learning to be evaluated in different educational environments.

9.9   Most adults see the world of the internet and video games as a new world. We are, as Marc Prensky (2001) puts it, the digital immigrants. Children are the digital natives. For them, new technologies are a seamless part of the world into which they were born. The challenge of empowering children to stay safe in this digital world is significant, but I firmly believe that it is achievable. I am honoured to have had the opportunity through this Review to set out how we as a society can work together to live up to this challenge.

B Netsmart!

By Bailey Jones aged 9

To be Netsmart you need to know how to stay safe when you use the Internet.
I am going to help you to be Netsmart! ☺

B SAFE

- First you should place the computer in a family room. So when you do things on the Internet your family can see.

- Never give strangers any information about you. ☹ Don't share with others your name, address, age, phone number and school. Never send out a picture of yourself!

- Don't spend long periods of time on the computer otherwise you can get a headache and when you come off the computer you can get spots in your eyes.

B ALERT

- Always tell an adult if some thing is suspicious while you are talking to someone on a chat.

- Only use a web camera when you are talking to close friends or family not strangers.

- Don't forget that some people are not who they say they are!!!!

B CLEVER

- Never arrange to meet up with anyone that you don't know.

- NEVER click randomly always read the description while searching.

The Internet is lots of fun when used safely. I message and play games with family and best friends.
Have fun and B Netsmart!

13 and under 'Netsmart' competition winner:
Bailey Jones, age 9

Glossary

ASA   Advertising Standards Authority

AUP   Acceptable Use Policy

BBFC   British Board of Film Classification

BCAP   Broadcast Committee of Advertising Practice

Becta   British Educational Communications and Technology Agency

BERR   Department for Business, Enterprise and Regulatory Reform

BSI   British Standards Institution

CAP   Committee of Advertising Practice

CPD   Continuous Professional Development

DCMS   Department for Culture, Media and Sport

DCSF   Department for Children, Schools and Families

DMG   Digital Media Group

DIUS   Department for Innovation, Universities and Skills

ECM   Every Child Matters

ELSPA   Entertainment and Leisure Software Publishers Association

ERA   Entertainment Retailers Association

ESRB   Entertainment Software Rating Board

FOSI   Family Online Safety Institute

HSTF   Home Secretary's Task Force on Child Protection on the Internet

IASH   Internet Advertising Sales House

ICT   Information and Communications Technology

IMCB Independent Mobile Classification Body

IP address The label that identifies each computer to other computers using the IP (internet protocol)

ISP   Internet Service Provider

ISPA Internet Service Providers' Association

IWF   Internet Watch Foundation

LAN   Local Area Network

LSCB Local Safeguarding Children Board

MMOG Massively Multiplayer Online Games

MMORPG Massively Multiplayer Online Role Playing Games

NAPP National Academy of Parenting Practitioners

Ofsted Office for Standards in Education, Children's Services and Skills

PEGI   Pan European Game Information

POSC PEGI Online Safety Code

PSA   Public Service Agreement

SEF   Self Evaluation Form

TDA   Training and Development Agency for Schools

TNWA The New World Assembly

UGC   User Generated Content

VSC   Video Standards Council

WAP   Wireless Application Protocol

Annexe A

The Byron Review approach to process and engagement

A.1 The Byron Review was commissioned on 6 September 2007 by the Prime Minister and the Secretaries of State for Children, Schools and Families and Culture, Media and Sport. A team of officials from both Departments was set up to support and guide me in completing this incredible six month task.

A.2 From the beginning, I have sought to put children and young people at the heart of my Review and to make sure that I listen to and reflect their opinions. I have tried to do this in a number of ways:

- A specifically tailored Call for Evidence designed for children and young people from whom I received over 350 extremely interesting and helpful responses from those aged between 5 and 18 years. This was complemented by my engagement through the Review's website and profiles created on a number of social networking sites where I was able to blog regularly with various age groups on issues raised by them. A summary of the Children's Call for Evidence can be found in Annexe D at *www.dcsf.gov.uk/byronreview*.

- Appearing on BBC's Newsround to promote my Children's Call for Evidence. I'd like to see more Government Reviews engage with children and young people who have so many insightful views to offer.

- A series of incredibly interesting and engaging focus groups involving 48 parents and 42 children and young people across the UK, segmented by age of child, socio-economic status, geographical location and level of concern about the internet and video games. From this an excellent report was produced for me by Solutions (Strategy Research Facilitation) Ltd, which is published alongside this report (Annexe E).

- Talking with the Children's Panels at CEOP and DCSF about their views on how to be safer when using new technology. These events with the children and young people were enthusiastically supported by DCSF and CEOP staff.

- Holding a competition with children and young people sending in text, pictures and other multi-media entries giving advice on how to stay 'netsmart' and 'game smart'. Around 250 amazing entries were received, including pictures, animations and videos. Some of these have been included throughout this report and the video entries are available on my website *www.dcsf.gov.uk/byronreview*. I recommend everyone has a look. I'd like to thank all the children who took part in the competition and all those who helped publicise it at short notice.

A.3 Gathering the views and evidence from a diverse range of stakeholders has also been absolutely crucial to the Review, and has ensured that my understanding of these challenging and sometimes complex questions has been sound and evidence based. I have staked much importance on trying always to be open, consultative and listening to the many views and opinions of those with experience and strong feelings about making children and young people safer in the digital world. I hope that everyone involved can look back and feel that they had the opportunity to help shape the Review's direction and development. I am grateful for the enthusiastic engagement, support and expert advice I received. Examples of the generous engagement of so many to this Review include:

- Launching a general Call for Evidence from 9 October to 30 November 2007, which received over 300 responses from key industry, third sector and individual stakeholders. A summary of the responses and a full list of respondents is available at Annexe C, on my website.

- Holding meetings with over 100 stakeholders, including trips to the United States and Ireland to meet with some of the major internet and video games industry players and public and third sector bodies.

- Holding an interim conference which brought together, at relatively short notice, over 100 key representatives from across the landscape (including those from the USA and Europe) to share ideas and discuss the emerging evidence, experience and direction of the final Report. I am grateful to those who spoke at the event, in particular, the Children's Commissioner for England, Sir Al Aynsley-Green.

A.4 I would also like to thank the representatives of the internet and video games industries and third sector organisations working with children and young people, who gave up a day to join me at one of three workshops in December last year to discuss some of my preliminary findings and ideas for making children safer when using new technology. I found those discussions thought provoking, robust and helpful.

A.5 In order to make sense of the vast array of evidence in this area I commissioned three literature reviews on:

- current media effects literature in relation to video games and the internet from Professor David Buckingham and colleagues at the Institute of Education;

- up to date research evidence on children's brain development from Professor Mark Johnson at Birkbeck University;

- a comprehensive review on the vast body of child development research from Professor Usha Goswami at Cambridge University

A.6 These are all published alongside this report as Annexes F, G, and H and can be found at *www.dcsf.gov.uk/byronreview*. The literature reviews were complemented by a series of workshops with academics to discuss the findings, and I know that everyone found the discussions useful and stimulating.

A.7   My review has been supported by the staff at Ofcom – in particular, support and advice from Jeremy Olivier and Helen Normoyle has been invaluable. As part of their response to the Call for Evidence, Ofcom submitted a quantitative survey of the views of children, young people and parents on internet safety and also an update of the Andrea Millwood-Hargrave and Professor Sonia Livingstone's authoritative study of harm and offence in media content.

A.8   I am particularly indebted to Dr Bettina Hohnen for her expert steer of all the academic engagement for my Review and her comprehensive analysis of all the evidence submitted.

A.9   I would also like to thank Elfie Sichel for her excellent proof reading.

A.10   Although I have been an Independent Government Reviewer I have been supported by a number of senior Government officials especially: Jeanette Pugh (Director of Safeguarding Group, DCSF), Brian Leonard (Director, Industry, DCMS), and Jon Zeff (Director, Media, DCMS). The 'virtual' Government Reference Group which I established was a key means of keeping relevant Government Departments informed of progress and sharing information. I am particularly grateful for the sponsorship, advice and support I have received from: Ed Balls (Secretary of State for Children, Schools and Families), Andy Burnham (Secretary of State for Culture, Media and Sport), and James Purnell (now Secretary of State for Work and Pensions).

A.11   I also valued the expertise of my independent Friends Group: Joe Elliot, Adam Gee, Jon Gisby, Fiona Romeo, Alice Taylor and Antony Walker, who offered challenge, support and acted as a sounding board on emerging ideas and direction. I would particularly like to acknowledge the continued and much valued support of Anthony Lilley, who has been a true Friend of my Review. The guidance and support of Lord Putnam of Queensgate has also been invaluable.

A.12   Most importantly I have been supported by the most dedicated, committed and talented team: Jason De Bono, Richard Eyre, Lucy Blackburn, Steven Ginnis and my exceptional team leader Claudine Menashe-Jones. I am indebted to them for enabling me to produce this Review so comprehensively in such a short space of time and allowing me to drive this process at a rapid pace from beginning to end. Most of all I commend their enthusiasm and support and thank them for having fun with me.

A.13   I'd like to dedicate this Review to the adults concerned with the digital child safety agenda and to encourage continued joined up, collaborative and respectful working together with a primary emphasis on listening to the voice of children and young people and placing their needs at the heart of all thinking. I'd like to thank the many parents who have stopped me in supermarkets offering their views on how they can be supported to do this.

A.14   Finally, I also dedicate this Review to a number of important groups: to all children and young people who have the right to safely enjoy all the exciting and new digital technologies and to all parents, teachers and carers who support them.

Dr Tanya Byron, 27 March 2008

Annexe B

Key Contributors

Below is a list of all those individuals and organisations that the Byron Review Team met with during the review process.

3 Mobile

Activision

Advertising Association, The

Advertising Standards Authority (ASA)

Advertising.com

Association for Infant Mental Health

Barrington Harvey

Bebo

Becta

Blitz Games

Blunkett MP, David

Boxer, Steve (Freelance Video Games Journalist)

Brazier MP, Julian

British Board of Film Claasification (BBFC)

British Broadcasting Corporation (BBC)

British Standards Institiute (BSI)

British Telecommunications (BT)

Broadband Stakeholders Group

Child Exploitation and Online Protection Centre (CEOP)

Childnet International

Children's Charities Coalition for Internet Safety

Children's Commissioner for England, (Professor Sir Albert Aynlsey-Green)

Children's Society

Clayton, Richard (Dr)

Council for Disabled Children

De Guzman, Joshua Luis Nino (Expert Gamer)

Department for Business, Enterprise & Regulatory Reform (BERR)

Department of Children, Schools and Families (DCMS)

Department of Culture, Media and Sport (DCMS)

Department of Culture, Media and Sport Select Committee

Department of Health, Social Services and Public Policy (Northen Ireland)

Dept of Justice, Equality and Law Reform (Republic of Ireland)

Digital Media Group (DMG)

DSG International

Electronic Arts (EA)

Entertainment and Leisure Software Publishers Association (ELSPA)

Entertainment Retailers Association (ERA)

Entertainment Software Ratings Board (ESRB – USA)

Facebook

Families Need Fathers

Family and Parenting Institute

Family Online Safety Institute (FOSI)

Fathers Direct

Federal Communications Commission (USA)

Federal Trade Commission (USA)

Future Publishers

Game

Google/You Tube

Gould, Chris (Omega Sektor)

His Masters Voice (HMV)

Home Office

Information Commissioner

Intenet Watch Foundation (IWF)

Interactive Software Federation of Europe (ISFE)

Internet Advertising Bureau UK

Internet Advisory Board (Republic Of Ireland)

Internet Education Foundation

Internet Keep Safe Coalition

Internet Service Providers' Association (ISPA)

Internet Watch Foundation (IWF)

Keibi

Le Forum des droits sur l'internet

Lintott, Lisa

Linx

Lord Puttnam

Lord Taylor of Warwick

Media Literacy Taskforce

Mediawatch

Metropolitan Police (Obscene Publications Unit)

Michael MP, Alun

Microsoft

Ministry of Justice (MOJ)

Mobile Broadband Group

Mobile Entertainment Forum

Myspace

National Association of Schoolsmasters/Union of Women Teachers (NASUWT)

National Centre for Missing and Exploited Children (NCMEC – USA)

National Children's Bureau

National Society for the Prevention of Cruelty to Children (NSPCC)

Nattional Association of Head Teachers

NCSoft

Netherlands Institute for the Classification of Audiovisual Media (NICAM)

Nintendo

O2

Office for Standards in Education, Children's Services and Skills (Ofsted)

Office of Communications (Ofcom)

Open Rights Group, The

Orange UK

Pakeerah, Giselle

Parenting UK

Parentline Plus

PEGI Advisory Board

Piczo

Progress and Freedom Foundation

Qualifications and Curriculum Authority (QCA)

Sainsbury's

Samaritans

Sony

Symantec

The New World Assembly (TNWA)

Thompson, Mozelle

TIGA

Time Warner/AOL

T-Mobile

Training and Development Agency for Schools (TDA)

Ubisoft

UK Online Centres

UK Video Games Industry Forum

United Kingdom Trade and Investment (UKTI)

Vaz MP, Keith

Video Standards Council (VSC)

Vodafone

Waters, Darren (Technology Editor, BBC News Interactive)

Which?

Woolworths

Wride, Phillip (Elysium)

Wyatt MP, Derek

Yahoo UK & Ireland

The Byron Review consulted a number of academics:

Dr Yaman Akdeniz

Dr Sarah-Jane Blakemore

Prof Raymond Boyle

Dr Jo Bryce

Prof David Buckingham

Dr Andrew Burn

Dr Carole Chapman

Dr Keri Facer

Prof Uta Frith

Prof Usha Goswami

Ms Lyndsay Grant

Prof Mark Griffiths

Prof Barrie Gunter

Dr Leslie Haddon

Prof Stephen Heppell

Dr Matthew Hibberd

Dr Daniel Johnson

Prof Mark Johnson

Dr Adam Joinson

Dr Maria Kanbouri

Prof Sonia Livingstone

Ms Andrea Millwood-Hargrave

Dr David Oswell

Prof Julian Petley

Dr Natasha Whiteman

Dr Monica Whitty

Dr Rebekah Willet

Members of the Byron Review 'Friends Group' were:

Joe Elliot

Adam Gee

Jon Gisby

Anthony Lilley

Fiona Romeo

Alice Taylor

Antony Walker

A full list of respondents to my Call for Evidence can be found online as part of Annexe C: Call for Evidence Summary Report.[1]

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1 www.dcsf.gov.uk/byronreview

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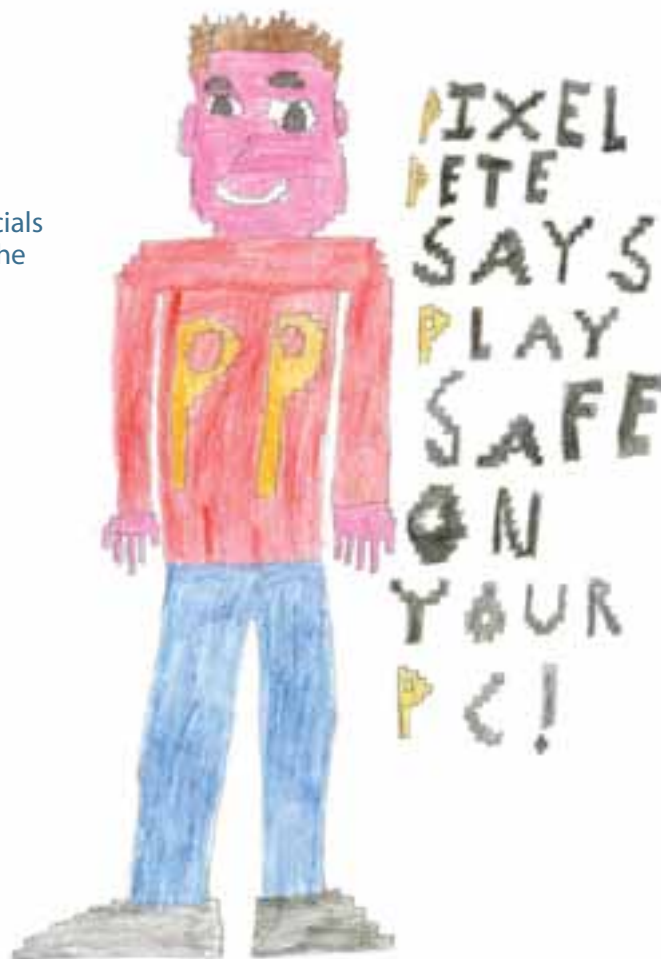**Byron Review**
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