E-learning: The Dark Side?

There are concerns that the Internet has created new risks for our society and in particular for young people. We argue that the way we frame these risks is affected by the way we view young people, in particular their maturity and ability to make choices for themselves.

A recurrent metaphor concerns the ‘dark-side’ of the Internet which draws on ancient and modern myths about the nature of good and evil. We argue that a knowledge divide between adults and youth has developed concerning the use of digital technologies. Digital natives are able to change the power balance of our society: this threatens the status quo and therefore has created a moral panic.

The key areas of concern for risk include: cyber-bullying, game-playing, social networking, sexual solicitation and addictive behaviours. Although these areas present real risks, we note that young people are moderating their own behaviour as they develop understandings about the possibilities offered by new technologies. The answer to our concerns should not be to seek to control digital technologies, but rather to educate adults and young people about what is possible and appropriate, so that they can choose to become responsible, digital citizens of the 21st century.

1. Introduction

“There is no dark side of the moon, really. Matter of fact, it’s all dark.”
Pink Floyd, Dark Side of the Moon

Does the Internet have a dark side? Should we be protecting ourselves and our children from the dangers of the Internet or encouraging them to embrace the opportunity for knowledge and community that it offers? The way we frame our answers to this question is structured by our implicit assumptions about human nature and our understandings about self and society. In this article we will look at these assumptions and review the scientific evidence to see how much we can bring these two sets of understandings together.

One assumption concerns the power of persuasion and hence the ability of individuals to resist influences from powerful others. One view sees the person as passive, malleable and gullible, and the other sees the person as active and capable of making decisions and being discriminating. The volume of books about persuasion on the psychology, business and self-help shelves illustrates our concern and interest in the issue. A second assumption about human behaviour, crucial to our response to the Internet, concerns our view of children and the maturity they are able to show when given the opportunity to do so. This view affects the level of responsibility we allow them to exercise.

These assumptions about human behaviour are only partially framed by the scientific evidence available because they touch our core beliefs about what it means to be human. The ‘dark-side’ is therefore a useful phrase to explore because it refers to a modern retelling
of judeo-christian ideas about people. The ‘force’ (in the film Star Wars) refers to a universal and metaphysical power that we have access to, but whose strength is so great that it can turn us from good people to bad if we don’t use it wisely. Use it unwisely and you will go to the ‘dark side’ and become consumed by your own darkness such as addiction or a lust for power. This central story of good and evil about how we see ourselves and our society has a profound effect on the general response to the Internet.

2. Perceived risks

We live in an increasingly risk averse society, and this is particularly true in relation to the protection of children. The different focus that schools adopt to safety concerns about the Internet was illustrated by two neighbouring primary schools that we visited in 2006 as part of a research project for the UK government (Underwood et al., 2007). Situated in rural East Anglia with similar catchments, demographics and rated as above average on national criteria, each viewed the computers in their schools in very different ways. Our contemporaneous observations which we report here are in stark contrast. The first school was on the ‘opportunity’ end of the spectrum,

“The school is delightfully unaware of technical details and only showed a passing recognition of the local broadband consortium (e2bn) who probably provide their broadband link. […] The school believes that most children have access to computers at home and many have access to the Internet. Access at school is largely in lesson time though pupils are allowed to use the unlocked ICT suite in break-times with permission. The school could not name who carried out the blocking of unwanted Internet sites. It was presumed to be the LEA [Local Education Authority]. The school had not experienced any major problems with the Internet though it was accepted that unwanted material would occasionally slip through the filters, for example a search for material on waterfalls elicited some mildly erotic images. The policy of the school is to encourage children to respond responsibly to such material and to delete and report it. There has been no need to take any further action so far.”

The second school was on the ‘danger’ end of the spectrum

“The classroom computers and the mini-suite were not being used on the day of the visit because the ICT coordinator had just found some unwanted material on one of the machines and was waiting for [the Local Education Authority] to send someone to check it out. The school is assiduous in its attempts to keep unwanted material away from the pupils and to make sure that they do not inadvertently come across an offensive site.” (unpublished research notes)

The contrast between teaching children to click-away from inappropriate material and training all staff to monitor children and close down the system if there are any concerns could not be more marked. This was not a unique observation and we recorded similar contrasting approaches in neighbouring schools in other parts of the UK. The different approaches, we argue, have less to do with understandings about the Internet than with assumptions about human behaviour.

3. What are the risks?

We will look at some of the risks that have been identified to be associated with the use of internet and then consider whether these represent new challenges for educators or whether they are new expressions of old risks.

3.1 Cyber-bullying

Online aggression is a very real danger. In a study of 501 regular Internet users (aged 10–17 years), 19% were involved in online aggression, 3% were aggressor/targets, 4% targets only, and 12% online aggressors only. Aggressor/targets reported characteristics similar to off-line bully/victims. Furthermore, cyberbullying rapidly transfers to real life, leaving children with no place to hide and teachers with an undercurrent of activity they have no control over (Ybarra & Mitchell, 2004). There are clear sex differences in the acceptance of risk and in cyberbullying, with young males being greater both greater risk takers and more involved in cyberbullying (Dehue et al., 2008).

The question to consider is whether this represents a new and substantial hazard for children or whether it is a different expression of the social negotiation that is part of every child’s development. Furthermore we have to consider whether regulation by adults is the best strategy as it involves the invasion of the private worlds of young people, and whether leaving space for the development of social skills in these young people will provide greater long-term benefit.
3.2 Game playing

As the developing child acquires social norms about acceptable behavior from his or her experiences, any activity that promotes violence is likely to be a risk factor for violent behavior. The repetitive playing of violent games has been reported as leading to more aggressive behavior and the desensitisation of the individual demonstrating by decreased brain activity when shown scenes of real violence. (Bartholew, et al., 2006). Meta-analyses, combining data from hundreds of individual studies, confirm an association between exposure to violence in media and antisocial tendencies such as aggression (Huesmann, 2009). Although Ferguson (2010) asserts that much of the research on the link between gaming and aggression is inconsistent and hampered by poor methodologies and the intrusion of ideology and dogma.

The risks associated with less violent video games, particularly those marketed to young children are not well understood, but recent research has shown experimental evidence that video games may displace after-school activities that have educational value and may interfere with the development of reading and writing skills in some children (Weis & Ceranksoky, 2010). It is worth reflecting, however, whether previous generations of children have also turned away from educational activities to play football or tiddlywinks or French skipping.

3.3 Unwelcome sexual solicitation

It is difficult to collect reliable data on sexual solicitation via the Internet. One large-scale study in the USA (Finkelhor, Mitchell and Wolak, 2000) carried out interviews with a sample of 1,501 youths aged 10 to 17 years who use the Internet regularly (at least once a month for the past 6 months). They reported that 19 per cent of their sample received an unwanted sexual solicitation or approach over the Internet in the previous year. The definition was extremely broad and included someone trying to get them to unwillingly talk about sex; asking unwanted intimate questions; requests to do sexual things they did not want to do; and invitations to run away. In addition, 3 per cent (one in seven of all the solicitations) included an attempt to contact the youth via telephone/postal mail and/or in person so the vast majority were associated with the Internet. However, the survey found few sexually orientated relationships between young people and adults. This last point appears to support the idea that children are able to insulate themselves from the more serious hazards.

3.4 Social networking

Do people behave different when communicating online to how they do in face-to-face situations? Online interactions have been found to generate more self-disclosure and foster deeper personal questionings than face-to-face communication (Tidwell & Walther, 2002). Underwood, et al. (2011) identified 3 types of Facebook users in young people. One group, the broadcasters exhibited worrying high risk behaviour which tended to focus on one-to-many low quality communications, in which self-promotion and lying were clearly evident. Could it be that social networking facilities encourage risky behaviour in vulnerable young people and open them up to the possibilities of dangerous relationships and encounters? Another feature of social networking is the ability to know ever more details about your partner including their changing moods (status on Facebook), where they are (Find my iphone) and who they are with. It is perhaps no surprise that heavy Facebook use is associated with increased levels of jealousy (Muise, et al., 2009).

Use of social networking sites has been associated with greater levels of social capital, or benefits made possible by the existence of a social structure. For example, Ellison et al. (2007) have show that students who are active on Facebook feel higher levels of both forms of social capital, and the effects are greater for students with lower self-esteem. However, the perceived benefits may depend on the nature of the interactions. A survey of 1,193 students found users who engaged in directed interaction with others, such as leaving wall posts or messaging friends, reported lowered feelings of loneliness and increased feelings of social capital. On the other hand, students who engaged in passive viewing of others’ content, such as status updates and photos reported feelings of increased loneliness and reduced social capital (Burke, Marlow & Lento, 2010).

3.5 Addictive behaviour

Addiction is a perceived danger of Internet use that is fuelled by parental concerns about the amount of time their children appear to spend online. Recent surveys suggest that about 2% of youth can be described as having Internet addiction with 10%–20% engaging in at-risk Internet use (Johansson & Götestam, 2004; Cao & Su, 2007, Christakis et al., 2011). There is some evidence that adolescents and college students that are heavy users of the internet have lower self-esteem and are more socially disinhhibited (Niemz, et al., 2005), but a recent review of the area (Widyanuto & Griffiths, 2009) concluded that if internet
addiction does indeed exist, it only affects a relatively small proportion of the population and there is very little evidence that it is problematic among adolescents.

4. Digital natives and moral panics

There are perhaps two features of the digital world that enhance the fears of the general population. In the first instance it belongs to the young. Yes, we all use digital technologies but the learning environment has been transformed by them and as Prensky (2001) notes today’s young people “are no longer the people our educational system was designed to teach” (page 1). They “are all ‘native speakers’ of the digital language of computers, video games and the Internet” (page 1). In our research on the impact of digital technologies in schools (Underwood, et al., 2007) we observed a class of 27 four and five year old children log on to their laptops and develop new versions of the song ‘Twinkle, twinkle little star’ for a full hour despite having very limited reading and writing skills. For example it was noted at the time,

“During a demonstration to the whole class, the teacher had difficulty in making the programme work. She was able to problem-solve in front of the class and finally demonstrate how to move the words around on screen and put them into cells in the on-screen grid. This did not trouble either the teacher or the children. The solution was to move the cursor over the cell and then press SHIFT and LEFT CLICK at the same time to select it. This was initially taxing for the children when they returned to their laptops but some of them picked it up very quickly and were soon confidently putting text into the various cells.” (unpublished research notes).

These digital natives have a different experience of dealing with information and technology to previous generations. Technology use is associated both with transient changes in arousal/mood and with long-term changes in behavior/brain function. Prensky (2001) goes on to suggest that this change is having an effect on brain structure but whether this is the case or not, it is clear that young people bring a different skill set to school and to life in general.

The second feature that enhances fears about the digital technologies comes from this association of the changes in technology with the age-group who are the principle users. Adolescence is a period of rapid increases in physical and mental capabilities. Yet, despite having the cognitive ability to understand risk, mortality rates increase by over 200% in this dangerous age (Dahl, 2004) because it is also strongly associated with risk-taking, sensation seeking and reckless behaviour. All of which can have life-changing consequences for the individual. While adolescents are good at assessing risk under conditions of low arousal and cool emotions, under intense emotional arousal they can fail to make a responsible choice.

The fear about young people and their behaviour has been a recurrent theme. Sociologists observe the moral panic (Cohen, 2002) that is created when people fear a threat to the social order. The term was originally used to describe the reaction to youth culture as it developed mid-way through the twentieth century as young people became independent consumers in the new age of prosperity. In today’s world it is digital technologies that present a clear and present danger to the social order and the demonisation of the Internet is a response to that threat.

The digital technologies represent a threat to the social order because they create a shift in power. There is a loss of adult power over children because much of the digital word is a mystery to parents. There is also the democratisation of knowledge that the Internet offers through facilities such as Twitter. Governments, even repressive governments, are no longer able to control the flow of information. The loss of power from people and organisations who are used to exerting it creates uncertainty and fear.

5. What’s to be done?

To reiterate, we live in a risk averse society and so one of the first responses to a threat is to restrict access to digital technologies and to try and control them. The metaphor we would suggest here, however, is of the outdoor world. Mountains are very good to look at but can be dangerous if you climb up them. People sometimes get lost on them and occasionally fall off them. There is no suggestion that we should fence them off and protect people from themselves, rather we urge walkers to have the right kit and to develop relevant skills such as the ability to read maps. However, with the Internet we consider this a possibility because of the moral panic that has been generated to demonise it.

If we consider again the risks associated with the Internet that we looked at above, then we must ask to what extent these risks are exclusive to the Internet, and how great the risk really is. We must also ask who is at risk. The youngest children have low exposure, but risk rises as children approach adolescence. As Ferguson (2010) remarks we are at risk that concerns about
technology use could move beyond objective examination and into the realm of ideology, dogma and moral panic

One aspect of the moral panic concerns the impact of video from television and YouTube. Newspaper reports suggest that over ten hours of video is posted on YouTube every minute and the 20 million daily viewers in the UK watch more than 3.6 billion videos online every month (Johnson, 2008). The fear is that we have created a cult of the amateur where what we see on YouTube is given equal weight to the considered evaluation of journalists. If we all become amateur journalists and critics then there are no experts, and the prevailing view is formed by the loudest and most opinionated (Keen, 2007).

A counter view comes from the report on the Video Republic by the UK think-tank Demos (Hannon et al, 2008). They note the problems with the rise of video culture but comment that it offers hope for new forms of democratic expression and participation. They provide many recommendations for how we can embrace the technology and better prepare our young people for work and for life. For example they recommend

“Schools, universities and businesses should prepare young people for an era where CVs may well be obsolete, enabling them to manage their online reputation. They should pass on guidance from recruitment agencies and other experts to help them make informed decisions about what they put online and contribute to the Video Republic.” (page 66)

The Demos report also uses the ubiquitous ‘dark-side’ rhetoric but they come up with a solution to the fear of harmful and objectionable material.

“Currently the tools we have to distinguish between harmful content are too blunt: content is either deemed ‘inappropriate’ or is for over-18s only. People should have the ability to select age-rating systems for videos on websites. The average of these ratings could then be translated into a region’s film-rating classification system.” (page 70)

In other words, use the facility developed by TripAdvisor and Amazon and other consumer sites to allow users to post evaluations and view the evaluations of others. The expert judge is replaced by the collective expertise of the users. Although there are concerns about the ability of the crowd to make good decisions (Keen, 2007) it is part of the modern democratisation of knowledge that allows us to comment on things and events and see the comments of others.

6. Are Internet dangers different to real-life dangers?

Many hazards and associated risks offline are relatively well known and understood but we have yet to fully explore whether online hazards and risks are essentially the same or, in some important ways, different from those in the non-virtual world. However, one area where there appears to be a difference in the level and quality of risk between off and online worlds is the area of cyberbullying. Bullying is a phenomena in all walks of life but technology brings a new dimension to this problem in that the victims of bullying feel unable to escape and the perpetrators feel invulnerable due to anonymity.

Recent data from the UK suggests that 19% of children between the ages of 9 and 19 say that have been bullied in the last 12 months. Interestingly for this debate when you break down that figure you find that 13% of those instances were face to face, 3% were via mobile phones and only 6% were via the Internet (Livingstone et al., 2011). The report, which included data from countries across Europe goes on to note that “Bullying online appears more common in countries where bullying in general is more common (rather than, say, in countries where the Internet is more established).” (page 62)

The evidence for the other areas we suggested above, addictive behaviours, game playing, social networking and unwelcome sexual solicitation is much less clear. These are all issues for offline behaviour and so our focus on the potential damage created by the Internet means we are focusing on the medium and not the real problem. If we return to the ‘dark-side’ metaphor then just as with these myths, the dark side is not out there but inside people. And this brings us back to the assumptions we hold about people, their ability to deal with persuasion and the responsibility they have for their actions. Do we see people as passive, malleable and gullible, or as active, discriminating and capable of making intelligent decisions?

7. Dealing with risk

We argue in this paper that the Internet does not pose a special threat in and of itself. It is not the dark side but is another stage on which people display the full range of social and interpersonal behavior. As such it is also the stage where some negative and distressing behaviours can occur. The issue we argue is about identifying who is particularly vulnerable to these risks and how we can provide some structure that limits the extremes of negative behavior.
The first challenge is for adults to be aware of what happens on the Internet and to offer the same guidance for interactions online that they would offer for face to face interactions. Parents appear to be overconfident, for example, about the extent of bullying. Among the 3% of European children who reported that they had been bullied on the Internet, less than a third of their parents (29%) were aware of this with over half asserting that their child had not been bullied (Livingstone et al., 2011).

As noted above, the Internet belongs to the young and parents and teachers are only partially aware of what children are doing. This lack of knowledge can create a sense of threat in those who are aware of their lack of knowledge. It is worth noting however that a detailed analysis of the 3% of children who were bullied online found that over 90% reported that they were not bothered by the event after a few days (Livingstone et al., 2011). They were commonly able to do something about it by, for example, blocking the person who sent the message. So the threat is out there, but it is much less than the face-to-face threat and children are commonly able to find ways of dealing with it.

Further evidence on the different approaches of parents and children comes from the ongoing Ofcom Media Literacy Studies in the UK (Ofcom, 2011). In the most recent study they find that parents are more likely to be concerned about the television content their child watches (31%) compared to Internet content (23%). The issue to consider is whether the reduced concern about Internet use is justified. The responses of the children to the survey suggest that there are, indeed, reasons to be cheerful. For example, close to half of 12-15 year olds who use search engines make critical judgements about the results concerning the truthfulness of sites. Also when asked about their attitude towards sharing personal information online, the majority of children in this age range said they would either want nobody or only friends to see their information (Ofcom 2011).

The second challenge is to help young people to understand the risks related to the Internet. That such an understanding is developing is shown by a set of studies on student use of social networking sites. In 2005 Gross and Acquisti (2005) surveyed 4,000 student Facebook users and found a disturbing degree of naivety about personal information. These students openly provided sensitive data: over 50% broadcast their address and very few used the privacy settings. By 2007 Fogel and Nehmad (2009) found only 10% of students were openly distributing their personal address. Use of the privacy settings is also increasing. In 2007 Lewis, Kaufman and Christakis (2008) found that a third of students had private profiles of which less than 10% allowed some level of restricted searching, while Dey, Jelveh and Ross (2012) report that in 2010 less than 20% of their 1,700 users hid their friend lists but that this had increased to over half using this form of self-protection some 15 months later. This move away from the default privacy settings to more restrictive settings is evidence of increasing awareness of privacy and security issues had increased. Our young can and do learn. We need to provide convincing evidence for them to do.

8. Conclusions

We argue here that it is important for teachers and parents to make themselves more familiar with the Internet and hence of the potential risks. Currently in the UK half of parents with children aged 5-15 who use the Internet believe that they know less about the Internet than their children (Ofcom, 2011). It is clear that parents are becoming more aware of the risk and the 2011 Ofcom survey showed an increase in homes using passwords on their multichannel televisions (36% to 44%) but no change in the use of parental controls on Internet use (steady at 39%). Simple controls and observations of behavior can manage the majority of risks.

We argue here that the most effective way to manage risk on the Internet is to help the young to gain an understanding of the risks related to the Internet and then trust in the maturity of young people, and trust in their overall judgement and social skills to negotiate these new ways of relating and behaving. Apgar (2006) coined the term risk intelligence, that is the capacity to learn about risk from experience. We need to expose the young to risk in safe environments such as schools so that they become risk intelligent. In this way they can be guided to become responsible, digital citizens of the twenty first century.
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