

Harmful to Children?

*Drawing Conclusions from Empirical Research on Media Effects**

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What harm and offence do the media cause?

Teenage boys shooting classmates, fears of increasing xenophobia, rising levels of obesity or appalling murders with sexual elements are commonly linked back to the (mis)use of particular types of media content, be they delivered by film, television, the internet, advertising or even print. That is the public face of the moral panic about media influence. The academic and policy debates that parallel, and respond, to public concerns, focus on the evidence for media harm, particularly that which may be caused to children through viewing inappropriate, especially violent, media content.

Policy makers and regulators are seeking to understand the changing parameters of the possible given the growing convergence of media delivery platforms which offer faster, easier access to material that was hitherto difficult to find. In this process, the concepts of 'harm' and 'offence' are gaining prominence. The *2003 Communications Act* changed the broadcasting standards debate in the UK by moving from the previously held concepts of 'good taste and decency' to offering 'adequate protection... from the inclusion of offensive and harmful material'. These concepts echo those in the European Union's *Television without Frontiers Directive*, currently being debated in a revised form. Although the debate continues to centre on the exposure of minors to potentially harmful or offensive material, there are other sensibilities to be considered, such as offence or harm caused to those from minority groups.

While harmful and offensive material is, in principle, distinguished from that which is illegal (obscenity, child abuse images, incitement to racial hatred, etc), it is not easy to define the boundaries in a robust and consensual fashion. What content is considered acceptable by today's standards, norms and values, and by whom? Borderline and unacceptable material may include a range of contents, most prominently though not exclusively 'adult content' of various kinds, and these

may lead to considerable public concern. While norms of taste and decency can be tracked with some reliability through standard opinion measurement techniques, methods for assessing harm are much more contested and difficult. Arguably too, the research evidence – of which there is a huge amount – is concentrated on a media environment and a regulatory regime that is now rapidly changing, rendering the evidence potentially out of date as regards its usefulness in policy formation.

With the arrival of newer media, particularly the internet (though also digital television, mobile phones, etc.), it is not clear how far the public recognises or feels empowered to respond to the expanding array of content on offer. It is likely that these newer, more interactive media pose a challenge not only to regulators but also to ordinary families. Can they apply familiar domestic practices of regulation and restriction to newer media? What range of concerns do people have regarding new media forms and contents? What do they need to know about whether or not the greatly-expanded range of contents now available to children have been shown to cause harm?

Policy debates attempt to balance the often-conflicting concerns over possible harms against other concerns, most notably, civil liberties and freedom of speech, economic competition, children's rights to exploration and privacy, and parents' capacities or otherwise to regulate their children's media use. Difficult issues arise. How do we draw the line between the offensive and the harmful? Is it a matter of particular kinds of contents, particular forms of media, particular groups of children? What kinds of harms, if any, have received robust empirical support? What is the evidence for offence across diverse sectors of the population?

It was to explore these questions – to give industry, the regulators and, indeed, the public a clear view of the evidence – that we conducted a critical literature review regarding harm and offence across media forms (Millwood Hargrave & Livingstone, 2006). Recent research on television, radio, music, press, film, games, internet, telephony, advertising, as well as the regulation associated with each of these, was evaluated in order to assess the potential for harm and offence in media content, and to identify where future empirical research is needed.¹

In the present article, we offer a brief overview of findings for each medium in turn, and then present our conclusions. The volume on which this article draws provides a full discussion of the many research findings summarised here, including an extensive and up to date bibliography. There, we distinguish theories of short-term and long-term effects, direct and indirect effects, and harm and offence. We also review the advantages and disadvantages of the main research methods in use (experiments, surveys, qualitative social research), noting the ethical and political issues that structure the field of research and stressing the value of integrating or comparing qualitative and quantitative research findings.

A summary of findings from the research literature

Television

Significant research effort has been expended on this ubiquitous and accessible medium, and many studies of other media are based on those from television. There is also a body of research that examines the benefits of exposure to television content but this is not considered here unless it also refers to a consideration of harm and offence. Methodologically, one must accept that much of the research evidence is flawed. Moreover, much of it derives from a different cultural and regulatory environment (most of the research was conducted in the US). However, it is important to evaluate what the findings are, focusing on those studies that have minimised the methodological and other difficulties so as to understand the indications of influence and effect that they provide.

The evidence suggests that, under certain circumstances, television can negatively influence attitudes in some areas, including those which may affect society (through the creation of prejudice) and those which may affect the individual (by making them unduly fearful, for example). Thus, it seems that television plays a part in contributing to stereotypes, fear of crime and other reality-defining effects, although it remains unclear what other social influences also play a role, or how important television is by comparison with these other factors.

The primary subjects of research have been children and young people, as they are thought to be most vulnerable to negative influences which may, in turn affect long-term attitudes or behaviour. However, there is a growing body of evidence which suggests that there are also vulnerable groups of adults who may be negatively affected by certain types of media content; for example, people with particular personality disorders.

Many of the studies use experimental methods, and have been subject to considerable criticism. They demonstrate short-term effects on attitudes and behaviours, among a particular research sample (e.g. college students) and under particular conditions. Too little of the research evidence examines the viewing of age-appropriate material, although a number of studies use content popular among the target group being examined. Other studies use content analysis techniques to examine the nature of content, making assumptions about the way in which the images might be received. In the UK and elsewhere, qualitative and social research techniques show it is valuable to talk to audience groups to understand their reasoning and reactions to content they view.

The review of research showed the importance to the audience of certain variables in making sense of or justifying a portrayed act. These include the context within which the act is set and the importance of identification and empathy with the protagonists. Transmission time remains an important variable within audience attitudes towards current television content, with established conventions designed to reduce the potential for offence. Much of the research evidence shows that most audiences are generally able to distinguish fact from fiction. The

evidence also suggests that the viewing of fictional content does not diminish the distress that may be caused by violence in real-life.

There are clear audience differences based on gender (in particular, boys seem to be more influenced by violent content) and age; but also family settings, a predisposition for a particular programme genre, the way in which the content is used and other such variables all appear to play a part in the way content is viewed and assimilated. Much of the research has been less equivocal in demonstrating evidence for areas of offence caused (such as with regard to offensive language, violence or the depiction of sexual activity) in comparison with harm, and contextual and demographic variables are seen particularly to affect the levels of offence felt.

Radio

Despite being the background to so many people's lives, little recent research on radio was found in relation to questions of harm. Such concern as does arise is concentrated particularly on talk shows and similar programmes based on call-ins or user-generated content, and in relation to the lyrics of popular music. Research shows that radio is found to be offensive on occasion by a substantial minority of the audience – particularly in relation to the treatment of callers by presenters, offensive language and racism.

Music

There is little research which examines harm and offence in relation to music. The research that exists is mainly content analytic rather than based on audience reactions, except for occasional opinion surveys, and is mainly focused on popular music lyrics. These studies reveal consistent messages in music lyrics that may be harmful and are that considered offensive by some – including messages promoting violence among boys/men, homophobic messages, or those encouraging early sexuality among young girls/women. Some argue that these are particularly damaging for ethnic minority audiences. There is a small body of experimental evidence suggesting that, as for other media, these messages can negatively influence the attitudes or emotions of their audience.

Print

The history of the print media and the precedents set in terms of policy making have helped frame debates about other media and have also provided a framework for the way in which much media content is regulated. Research suggests the print media, especially the press, can frame public discourse, providing important civil information. The potential complicity of the media in misinformation is identified as problematic in many studies. Such harm as may result not only affects the individual but also has broader consequences for society. How-

ever, the importance of the public or private nature of different types of print media (e.g. bill boards versus magazines) has not been widely researched, although the evidence suggests that how strongly one is affected by print content is closely linked with this distinction.

Film, video and DVD

The empirical research evidence for harm and offence in relation to film has been concerned primarily with 'adult' or relatively extreme sexual and violent content, such material being more available, though restricted by age, on film and video than – at present – on television. Although concerns are consistently raised regarding the reality-defining (McQuail, 1987) or stereotyping effects of film, we found little recent research on this. Evidence for emotional responses to film, particularly fear, exists and is relatively uncontroversial, though whether this constitutes longer-term harm is more difficult to determine given the absence of longitudinal research studies.

Considerable attention has been paid to pornography, focusing variously on harm to those involved in production, to male consumers, to children, and to society (especially, attitudes towards women) more generally. The evidence for harm to men viewing non-violent (or consensual) pornography remains inconclusive or absent. However, the evidence for harm from viewing violent (non-consensual) pornography is rather stronger, resulting in more negative or aggressive attitudes and behaviours towards women as well as supporting the desire to watch more extreme content.

The evidence that viewing pornography harms children remains scarce, given ethical restrictions on the research, though many experts believe it to be harmful. Other vulnerable groups have been researched, however, with some evidence that the harmful effects of violent content especially are greater for those who are already aggressive, for children with behaviour disorders, for young offenders with a history of domestic violence and – for pornographic content – among sexual offenders.

Public attitudes to film content are, generally, more tolerant than for television. This is partly because the public is aware, and supportive of, current levels of regulation in film, and partly because people understand the decision process behind choosing to watch violent or sexual content. Tolerance is lowest (or offence is greatest) for the portrayal of sexual violence. Studies of audience interpretation of potentially harmful or offensive content in film throw some light on the complex judgements made by the public in this area. Nonetheless, as the conditions for viewing film – both at home and in the cinema – are changing, too little is known regarding the conditions under which people, especially children, may gain access to different kinds of potentially harmful content.

Games

Although research on electronic games is relatively new, it is strongly polarised between the psychological/experimental approach that argues that electronic games have harmful effects, and the cultural/qualitative approach that tends to defend games as merely entertaining, even beneficial on occasion.

In the psychological/effects approach, a growing body of research is accumulating which suggests harmful effects, especially for games with violent content, especially on the boys or men who play them. However, this research remains contested in terms of how far it can be applied to aggressive situations in everyday life. It also remains unclear how much this evidence concerns media violence in general and how much it is video-game specific. One empirical comparison across research studies found that the effect of violent video games on aggression is smaller than that found for television violence. However, more research is required to compare the effects of, for example, violent television and video games. On the one hand, it has been argued that television imagery has hitherto been more graphic/realistic and hence more influential (although technical advances in video game technology are allowing them to 'catch up'). On the other hand, it has been argued that video games require a more involved and attentive style of engagement – a 'first person' rather than a 'third person' experience – which may make games more harmful.

Internet

The widespread accessibility of the internet, along with its affordability, anonymity and convenience, is seen by many to increase the likelihood of media harm and offence. While some argue that there is little new about online content, familiar contents merely having moved online, most disagree, expressing concern about the accessibility of more extreme forms of content that are, potentially, harmful and offensive.

The lack of clear definitions of levels or types of pornography, violence, etc on the internet, where the range is considerable, impedes research, as do (necessarily) the ethical restrictions on researching the potentially harmful effects of online content, especially but not only on children. As many defend online pornography as suggest it to be harmful. There is a growing body of research – though still small – suggesting such content to be particularly harmful for vulnerable groups, specifically people who are sexually compulsive and/or sexual abusers.

For children, despite the lack of evidence (and the lack of research) on harm, there is a growing body of national and international research on children's distress when they accidentally come across online pornography and other unwelcome content. There is also a growing literature on the potentially harmful consequences of user-generated content. This includes everything from the school or workplace bully to the grooming of children by paedophiles. It has become evident that many children and adults experience some risky contact.

Further, research shows that when people – adults and children – receive hostile, bullying or hateful messages, they are generally ill-equipped to respond appropriately or to cope with the emotional upset this causes. Similarly, parents are unclear how they can know about, or intervene in, risky behaviours undertaken – deliberately or inadvertently – by their children. As for pornographic content, the consequences of exposure seem to be more harmful for those who are already vulnerable. People's responses to 'hateful' content tend to be more tolerant, on the grounds of freedom of expression, though they find it offensive. Little as yet is known of how the targeted groups (mainly, ethnic minorities) respond.

In general, the case for further research seems clear, firstly in relation to the characteristics of vulnerable groups (including strategies for intervention) and secondly in relation to the ways in which the internet seems to support or facilitate certain kinds of harmful peer-to-peer activity.

Mobile telephony

There is growing evidence that mobile telephony may cause harm through the creation of fear and humiliation by bullying, for example. Although it is evident that new communication technologies are being incorporated into practices of bullying, harassment and other forms of malicious peer-to-peer communication, it is not yet clear that these technologies are responsible for an increase in the incidence of such practices.

There is little substantive academic evidence for the potential risk of harm or offence caused through access to the professionally-produced content market for mobiles, although inferences are being made about such possible effects from other media. It is questionable whether mobile technologies are used in the same way as other fixed media, particularly because they have rapidly become personal and private forms of communication. This is an area where the lack of research evidence is especially felt.

Advertising

There is a moderate body of evidence pointing to modest effects of both intentional (i.e. product-promoting) and incidental (i.e. product context) advertising messages. This suggests that advertising has some influence on product choice, and that the nature of its portrayals has some influence on the attitudes and beliefs of its audience. Specifically, a range of reality-defining effects have been examined in relation to the stereotyping of population segments and, most recently, in relation to obesity and other products with health consequences. Research tends to show modest evidence for harmful effects of advertising, particularly on children, although this remains contested. Since the influence of advertising is not large, according to the evidence, research is needed to determine what other factors also influence these harmful outcomes (stereotyping, obesity, smoking, etc).

This question of intent has implications for media literacy. In relation to advertising, the intent to persuade is generally considered acceptable provided the public recognises this intent. In relation to children, considerable research exists on the development of 'advertising literacy' with age, though it has not been clearly shown that more media literate, or advertising literate, consumers are less affected by advertising (or other media), nor that interventions designed to increase literacy have the effect of reducing media harm (Livingstone & Helsper, *in press*). Little is yet known of how all audiences – adults as well as children – recognise advertising, sponsorship, product placement etc in relation to the new media environment. There is also a body of research linking advertising to offence. This research reveals the considerable cultural variation, both within and across cultures, in what content is found offensive and by whom.

Drawing conclusions

Producing the above summaries has been more difficult than producing the lengthy account of the research on which these are based because the body of research on media harm (less so for offence) has long been subject to considerable contestation on theoretical, political and, particularly, methodological grounds. There can be, therefore, no uncontentious summary of research findings, nor will there be any simple answer to the question of media harm nor any definitive empirical demonstration or 'proof'. Consequently, our strategy in the review has been to incorporate, and balance against each other, the different kinds of findings, based on different methods (from experiments, surveys and qualitative social research) and different perspectives on the debate over media harm and offence, while accepting the different cultural and regulatory perspectives from which they derive. Further, though we do consider that more evidence is needed, especially for new media and for vulnerable groups, we note that the precautionary principle suggests that judgements may be reached assuming probable influence rather than postponing regulatory decisions to await the outcome of further research. On this basis, our conclusions are as follows.

Distinguishing harm and offence

In policy discussions, 'harm and offence' is often used as a single phrase. It is not clear, however, just what the difference between them is taken to be, nor how they each relates to legal and regulatory frameworks. Similarly, harm and offence are often not clearly distinguished in terms of research evidence. Indeed, other than in relation to legal or philosophical discussions of the terms as used in regulation, we have not found these terms used very much at all in the academic literature.

While there is a large literature on harm (usually labelled ‘media effects’), we have found little academic research on offence. Our assumption is that this is because, on the one hand, experimental researchers are unimpressed by the self-report methods used, necessarily, to assess offence (i.e. they would identify problems of reliability), while on the other hand, cultural researchers fear that research on offence opens the door to a culture of censorship. Nor have we found any theory relating to ‘offence’ (though there are many theories of media influence), this also helping to explain the lack of research on offence.

From a regulatory or industry point of view, however, ‘offence’ provides a route to acknowledging and responding to audiences’ or users’ concerns about media content precisely without framing this as ‘harm’. These bodies have, therefore, conducted a fair body of research, using both qualitative and quantitative methods, charting the extent and focus of ‘offence’ among the public, including some longitudinal tracking studies.

It follows that the distinction between harm and offence (or their relation to taste and decency) is not always clear. However, we suggest that harm is widely (though not necessarily) conceived in objective terms; harm, it seems, is taken to be observable by others (irrespective of whether harm is acknowledged by the individual concerned), and hence as measurable in a reliable fashion. By contrast, offence is widely (though not necessarily) conceived in subjective terms; offence, it seems, is taken to be that experienced by and reported on by the individual, and hence is difficult to measure reliably (and, equally, difficult to deny in the face of claimed offence).²

The terms vary in other ways. It may be argued that media harm can affect both the media user themselves and others around them. Harm may last for a short time or longer (though the evidence is largely lacking for the long-term effects generally hypothesised by media effects theories). The risk of harm may apply at the level of the individual, group or society. Offence, by contrast, may be thought to affect only the media user themselves (or, perhaps, group of individuals), and it is assumed to apply only in the moment (i.e. offence is not taken to last a long time, though it may be remembered). One implication is that it is easier potentially to demonstrate offence than harm, harm setting a high threshold in terms of evidence. Another is that the risk of harm merits greater attempts at prevention than does offence. A third is that the market may be assumed to address offence (since it damages the brand) while public intervention may be additionally required to prevent harm.

Each of these implications and assumptions can, of course, be contested: our point here is that the terms ‘harm’ and ‘offence’, although widely used, have attracted surprisingly little discussion or clarification. Interestingly, harm and offence, are generally discussed differently in relation to children and adults. Harm is assumed to vary by vulnerability, being greater for children and for vulnerable adults. Considerable research attention has, therefore, gone into identifying the risk factors for harm, and most research is concentrated on the at-risk groups (typically, children). By contrast, offence is not seen as related to vulnerability.

Older people and women are generally shown to find more media content offensive; yet this is not apparently related to vulnerability except insofar as differential levels of media literacy may make it harder for these groups to control their exposure to certain contents. Notably, there is little research on whether the media offend (rather than harm) children, and only recently is there some research on the response of marginal or low-status groups (adults and children) to the at times negative representations of them in the media (and whether this concerns harm or offence is unclear). This results in some inconsistencies when relating research findings to regulation: for example, if a child is upset by viewing violence, this is taken as evidence of harm; if an adult is upset by the same image, this is likely to be seen as offence.

Limitations of the evidence base

This review has noted a range of theoretical, methodological and political difficulties in researching the possible harm and offence in relation to media content. In many respects, the evidence base is patchy and inconsistent. Many questions remain difficult to research. Particularly, research can only offer evidence towards a judgement based on the balance of probabilities rather than on irrefutable proof.

Persistent questions remain regarding how far the largely American findings in the published academic literature may be applicable to the situation in any other country, given differences in culture, in regulatory context, in the media content available (and researched). Also, doubts persist regarding how far the largely experimental research findings may be applicable to ordinary contexts of media use, given the often unnatural circumstances in which experiments expose people to media content and the ways in which they tend to measure the effects of such exposure; similarly, questions remain as to how correlational evidence (from surveys) relates to causal claims regarding media effects, for few studies eliminate the possibility of alternative explanations.

One must also ask how far the largely television-based research may be applicable to other, especially newer media, given the likelihood that different expectations, knowledge and concerns attach to different kinds of media and communication technology. Other problems also exist. For example, in certain domains (e.g. rap music lyrics or gender stereotyping in advertising), the main body of evidence is based on content analyses; yet qualitative social research consistently shows that different people (e.g. children vs. adults, fans of a genre vs. those who only occasionally view) do not interpret content in the same way, making it risky to draw conclusions about effects from content analysis.

Definitions of media-related harm

A wide range of definitions of harm are suggested in the research literature (McQuail & Windahl, 1993), including:

- Changed attitudes or beliefs affecting the individual (e.g. fear of crime) or society (e.g. stereotypes of the elderly)
- Changed behaviours, particularly the increased propensity to harm others (e.g. aggressive behaviour, this damaging both the perpetrator and his/her possible victims) or for self-harm (e.g. anorexia, obesity, suicide)
- Emotional responses, affecting both self and others, including fear, upset and hate which may lead to harm if they are long-term in effect. Such responses may, arguably, be more appropriately regarded instead as 'offence'.

Of these, we suggest that more attention is often paid to the first two than to the third, yet there are, interestingly, many studies showing that the media can have negative emotional consequences, often but not only in the short-term. It is clear that this is recognised in many policy-related decisions and we recommend that greater consideration is given to emotional responses in future research and policy regarding harm and offence.

Much of the debate about media harms starts from the argument that the negative influence on an individual will, in turn, create harm to society. This view of an inter-relationship between influences and effects has been taken up by the popular media – in reporting crimes, for example, which are linked to supposed (though not always established) media exposure. Those harms that are caused to the individual through the perpetuation of unfair or stereotypical depictions are not much publicly discussed (though they are recognised both in the research literature and in content producers' Codes of Practice. We suggest it would be valuable to distinguish risk of harm to the individual exposed to media content, risk of harm to other people and, third, risk of harm to society in general.

Nevertheless it should be accepted that there may be inter-relationships between these possible harms. For example, to the extent that watching television violence encourages aggressive behaviour among boys, this risks, first, harm to those particular boys, second, harm to those against whom they might be aggressive (e.g. peers in the playground) and, third, harm to society (as aggression, and fear of aggression become more widespread). However, the processes involved, the consequences, and the potential for intervention differ for each kind of harm.

We also note that, among regulators and interest groups there is a call for care in the portrayal of violence or sex, especially to young people (as in the debate over in/appropriate role models for example). Interestingly, a children's rights perspective is beginning to be asserted to complement or counter the view of children as potential aggressors in society; this perspective has become particularly salient in relation to online and mobile media, including the new problem of varieties of user-generated or peer-to-peer harms (Finkelhor & Hashima, 2001).

There are other media-related social harms that are recognised through the regulatory process. For example, the regulation requiring the principal broadcasters in the UK to present balanced and impartial news programming is based on a notion that the audience must be fairly informed so as to make their own judge-

ments. There is evidence, however, particularly from the USA, that the news media negatively affect public opinion (e.g. encouraging a fear of crime by over-representing violent crime), and little is known yet of the potential effects of online or alternative sources of news (for example, research is needed into the effects of misleading or unreliable health care information).

A risk-based approach

When television first arrived in American homes, the founding father of media effects research declared:

... for some children, under some conditions, some television is harmful. For some children under the same conditions, or for the same children under other conditions, it may be beneficial. For most children, under most conditions, most television is probably neither particularly harmful nor particularly beneficial (Schramm, Lyle, & Parker, 1961: 11).

We suggest that, after a vast amount of further research findings, on the basis of 'a balance of probabilities', this remains a fair summary of the evidence, even if much of that evidence has been collected under a differently regulated media environment. Hence, this review has argued that the search for simple and direct causal effects of the media is, for the most part, not appropriate. Rather, this should be replaced by an approach that seeks to identify the range of factors that directly, and indirectly through interactions with each other, combine to explain particular social phenomena. As research shows, each social problem of concern (e.g. aggression, prejudice, obesity, bullying, etc) is associated with a distinct and complex array of putative causes.

The task for those concerned with media harm and offence is to identify and contextualise the role of the media within that array. The result will be a more complex explanation of what are, undoubtedly, complex social problems. This should, in turn, permit a balanced judgement of the role played by the media on a case by case basis. In some cases, this may reduce the focus on the media – for example, by bringing into view the many other factors that account for present levels of aggression in society. In other cases, it may increase the focus on the media – for example, in understanding the role played potentially by the internet in facilitating paedophiles' sexual interest in and access to children.

A risk-based approach seeks to take into account a wide range of relevant factors, as these establish the conditions under which any particular factor (such as media exposure) operates. Many such factors are culturally-specific, including national traditions of content regulation, approaches to parenting, and moral frames for judging content or determining offence. In addition to such factors, and in addition to the important differences across the media and hence across media access conditions, we have also sought to stress that content does not affect all audiences equally. Research suggests that there can be greater negative influences

on those who are 'vulnerable'. No standard academic definition of 'vulnerability' exists, but research findings do suggest that vulnerable audiences/users may include children and young people, especially boys, together with a range of other groups among the adult population (including psychologically disturbed individuals, people who are depressed, sexual offenders, young offenders, etc.).

Findings reviewed on a case-by-case basis

As indicated in the medium-by-medium review undertaken in each chapter, the evidence points to a range of conclusions depending on the social problem at stake.

For example, there is a sizeable body of evidence that suggests that televised portrayals of aggression can, under certain circumstances, negatively influence the attitudes and behaviours of children, especially boys. Similar findings exist as regards aggressive content in film, video/DVD and electronic games, though the body of research evidence is somewhat smaller. These media are, at present, all highly regulated in most developed countries through labelling and age-restrictions (or scheduling restrictions in the case of television). It seems likely that the risk of harm will be greater when children view content inappropriate for their age (i.e. intended for those older than them), though research does not always adequately link the effects of exposure to the specific nature or age-appropriateness of the content. However, we suggest that viewing is not always to age-appropriate material and these varying factors should be taken into account when 'reading' the research.

At stake is the likelihood of risk rather than of inevitable harm, for, as the research also shows, not all in the audience are affected equally and many, it appears, are not affected at all. Broadcasters, regulators and parents must continue to make balanced judgements of the likely risk to some children, bearing in mind the conditions of access (e.g. scheduling, intended audience, narrative context) and conditions of mediation (e.g. role of parental discussion of content or restrictions on access).

Taking a different case, we note that there is mounting evidence that internet-based and mobile communication technologies are being incorporated into practices of bullying, harassment and other forms of malicious peer-to-peer communication. However, it is not yet clear that these technologies are responsible for an increase in the incidence of such practices. This is partly because of a lack of sound data from, say, ten years ago, against which to compare present findings. However, research on the conditions of access points to a relative convenience and ease of use which, combined with highly personalised, private and often anonymous conditions under which these technologies are used, suggests that cyber-bullying, cyber-harassment, etc may introduce new kinds of problems for users, as well as exacerbating old ones. In some ways, it seems, online and offline communication work differently; but in key ways also, they work together. Thus, offline bullying or harassment can be continued or extended online, rather than

remaining entirely distinct. Given the difficulties faced by parents in understanding how to manage the conditions of access to these forms of content and contact, the implications for regulation should be judged in terms of balancing the responsibility across the industry, regulators, parents and children for controlling access and exposure.

For some putative harms, the evidence is generally lacking. For example, despite widespread public concern over the exposure of children to adult or pornographic images, there remains little evidence that such exposure has harmful effects, with the notable exception of material that combines sexual and violent content. This lack of evidence partly reflects the methodological limitations of the evidence (one cannot ethically expose children to certain images, there is no agreed definition of pornography, it is difficult to measure long-term psychological disturbance, etc). But it may also suggest that, at least in our present largely regulated content environment, the images available to children are not harmful, though they may be offensive or even briefly disturbing. If less regulated contents become more accessible to children (e.g. through the internet), researchers will need to find a way to overcome these methodological difficulties, particularly given the apparent growth in material that does combine sexual and violent content.

For yet other putative harms, the cultural context is crucial. Researchers have long pointed to the media's role in relation to reality-defining effects, arguing that the media provide the frameworks or expectations with which the public understands the world around them. This has been, in various ways, considered harmful – potentially reinforcing stereotypes of marginalised groups, providing a biased account of current affairs, exacerbating a fear of crime, promoting a commercialised culture of childhood, encouraging the early sexualisation of girls, and so forth. In general, the evidence for reality-defining effects generally shows modest effects on social attitudes or beliefs across the population. In other words, the findings show that media exposure explains a small proportion of the variation in attitudes or beliefs across the population. By implication, other factors also play a role, though these are not always well-researched. Reality-defining effects are theorised in terms of cultivation effects (the 'drip-drip' effect of repeated messages), agenda setting (defining what people should think about) and mainstreaming (making certain views 'normal' or standard, while marginalising other views). However, here too, the evidence is patchy and, by and large, not very recent. The difficulty here is that, as noted above, any effect of the media operates only in combination with many other social influences, and the effect is to be measured not in terms of an immediate impact on an individual but rather in terms of gradual shifts in social norms over years or decades. While few would suggest that the media play no role in socialisation or cultural influence, it remains difficult to obtain convincing evidence that the media play a primary causal role.

Putting media effects in context

We have evaluated the research on the potential role of the media in contributing to a range of social problems and drawn conclusions where possible. But it is important to note that we have avoided over-arching conclusions to be applied across all media and all segments of the public, for the evidence does not warrant such conclusions. To those who fear, then, that the media are responsible for a growing range of social problems, we would urge that the evidence base is carefully and critically scrutinised, for such findings as exist generally point to more modest, qualified and context-dependent conclusions. To those who hope, however, that the media play little or no role in today's social problems, we would point to the complex and diverse ways in which different media are variably but crucially embedded in most or all aspects of our everyday lives, and that it seems implausible to suggest that they have no influence, whether positive or negative.

Overall, it seems that the research literature points to a range of modest effects, including effects on attitudes and beliefs, effects on emotions, and, more controversially, effects on behaviour (or the predisposition towards certain behaviours). Effects on emotions have, we suggest, received less attention than they should perhaps command, most attention focusing on attitudes and behaviours; yet running through the literature is a series of findings of people being made upset, fearful or anxious by the media.

However, as we have also been at pains to point out, in each of these areas, there are some studies that find no effects, and most published studies have been contested in terms of their methodology and findings. It is particularly difficult to be clear about the scale of these measured media effects since unfortunately these are rarely compared with other putative effects (e.g. of parenting style or social background). Although it is widely argued that the effect of the media often depends on other factors also operating in the situation, the evidence here is generally weaker partly because there is no single theory of how indirect effects occur, partly because indirect effects are difficult to measure, and partly because indirect effects are often held to occur at the level of the culture not the individual (e.g. advertising → peer pressure → consumerism in society). Nonetheless, media effects appear to be one among many factors that account for the various ills in society (e.g. poverty, violence, fear of crime, stereotyping, etc.). Since, unfortunately, it is rare for research to identify or encompass these other factors within the same study, we cannot draw clear conclusions about which of these factors are more or less important.

Although effects are generally treated as direct (exposure to content → effect), increasingly researchers seek to identify mediating factors (exposure → mediating factor → increased or decreased likelihood of effect); such mediating factors include personality, age, gender ethnicity, parental influence, stage of cognitive development, viewing conditions, etc.³ This process of mediation renders the measured relation between exposure and effect to be indirect but no less significant. For example, Browne & Pennell (2000) report that, although the evidence sug-

gests that violent media → aggression, it fits a more complex story better. This states that poor background → choice of viewing violent media → distorted cognitions → aggressive behaviour. Note that this explanation is also more accurate than the simple claim that poor background → aggressive behaviour. In other words, each intervening step, showing indirect as well as direct effects of the media and other factors, is important.

Consequently, we have recommended turning around the central question in this field and asking not, do the media have harmful effects, but rather, do the media contribute as one among several factors to the explanation of a social phenomenon (violence, racism, etc.). On a balance of probabilities, it seems less contentious to say 'yes' to the second question than to the first. But this also requires that any claims for media harms are contextualised in relation to the other factors also contributing to the explanation. For example, to understand the role that television food advertising may play in children's diet, one must also examine the role of parental diet, school dinners, peer pressure, and so forth. To understand the role that television violence may play in levels of aggressive play among, say, primary school boys, one must also examine parental treatment of aggressive behaviour, the rewards and punishments operating in the playground situation, gender norms in the peer group, the difficulties experienced by some children at home, and so forth.

Which groups may be more vulnerable?

Many research studies suggest that content does not affect all audiences equally, there being more negative influences on those who are 'vulnerable'. In most cases, this concept of vulnerability is applied to children and young people who are in the process of forming attitudes and behaviours for later life. But it is also applied to other groups of people who may be vulnerable, for example, because of specific personality traits or disorders (this includes research on psychologically disturbed individuals, people who are depressed, sexual offenders, young offenders, etc.).

Findings on specific vulnerable groups may be summarised as follows. There does seem to be evidence that young males may be more consistently affected by media content, and so they can be considered among the more vulnerable of the groups. They seem more likely to respond to violent media content with aggressive behaviour than girls, for example, and the data suggest they evince greater changes in attitude when presented with various potentially harmful contents (violence, advertising, pornography, etc.), though there are a fair number of studies where girls also seem to be influenced negatively.

More attention has been paid to the reality-defining effects on girls of stereotyped or sexualised portrayals of gender; to the extent that these studies do show negative effects, however, they seem to occur for both genders. Reality-defining effects are sometimes shown particularly to affect minority or less socially valued groups (women, the elderly, etc.) – harm may thus be understood as en-

couraging negative attitudes both in the majority (e.g. racist stereotypes) and the affected minority (e.g. low self-esteem).

Research has examined different hypothesised harms in relation to different age groups. For example, concerns about the harmful effects of advertising tend to be investigated in relation to young children. Similarly, the effects of violent content are examined across the range from young children to young adults, though for specific media, research tends to follow usage patterns (e.g. film and games are researched for teens/young adults, television among younger children). The risks of malicious or harmful peer-to-peer contact online or by mobile have mainly been researched among teens and adults, although attention is turning to younger children.

Since different studies examine different age groups (often spanning very broad age ranges), evidence is sparse regarding developmental trends over the age range, making it difficult to pinpoint particularly vulnerable ages in relation to different media. It should also be noted that, for the most part, since research examines the effects of media on 'typical users', little is known about the effects on those who are not part of the typical or intended user group – further, ethical issues often preclude investigating the effects of exposure of younger children to material intended for older age groups.

Is there evidence that media contents may be offensive?

While academic research has focused on harms and the effects of the media, research into areas of offence has been conducted mainly by regulators and lobby or advocacy groups. Looking across all media, the research evidence suggests variable levels of offence. For example, in relation to television, around one in three have found something on television offensive, this more often being – as for most findings on offence – women and older people. This overlaps to some degree with our discussion of the risk of emotional effects or harms: recent research on self-reported emotional affects on being portrayed negatively as a marginalised groups (women, the poor, gay and lesbian people, ethnic minorities, the elderly and children) suggests that these groups are often angry and upset at being so portrayed in the media. Further research is needed to track the concerns of marginalised and minority groups.

Intriguingly, little research has been conducted into the offence that might be caused to children, although there have been intriguing projects which have spoken to children about their attitudes to a range of material (e.g. Nightingale, Dickenson, & Griff, 2000). Most of the work on offence is focused on adults. While there may be ethical reasons for this disparity, the research evidence does show that children may be offended by certain depictions, in particular but not exclusively, sexual activity.

Most research shows that, despite a substantial minority being offended, most people are tolerant of others' rights to view such material. The exception to this tends to be the combination of sex plus violence (as in violent pornographic

material), though even for such content, audiences seem to prefer to judge offence (and any regulatory responses that might follow) in relation to the narrative and aesthetic context of the portrayal. Generally, rather than calling for more restrictions on media content, the public is more inclined to call for better and more user-friendly access controls so that they can control what they see. Public support for content restrictions is highest in relation to the protection of children.

New forms of media are discussed more widely currently in relation to regulation than are the more established media for which, in many respects, the public is broadly supportive of the current regulatory framework. However, the findings are mixed on whether people are satisfied with (or even aware of) the available processes for making a complaint about media content.

Comparing evidence across different media

This review has shown that much of the research undertaken has been technology-specific, i.e. applied to particular media. There is relatively little work that has looked at the overall consumption of a particular type of content across the media although some studies have sought to do that, particularly in areas such as sexual depictions and violence.

In recognition of this, many of the regulatory structures are set up with particular technologies in mind. Studies show that consumers of different media forms often approach the content on one platform differently from the way in which they approach similar content on another platform. Nonetheless, there is an avowed determination, in Europe certainly, to move towards technologically-neutral regulation. One of the principles behind this is that the platform will become irrelevant to the consumer as the same or similar content is delivered across different platforms.

However, in a context of converging technologies and media content, we are particularly concerned at the lack of evidence providing a secure basis for making comparisons across media platforms (although see Ofcom, 2006). As we have noted, comparisons across different media regarding the nature or size of effects are difficult in methodological terms, though such research could and should be attempted. For the most part, then, in seeking evidence for harm and offence across media, one can only compare findings conducted for different media in different studies. Research has tended to extend the approach developed for television to video, games, internet, etc. – asking similar questions, and using similar methods, in relation to such potential harms as violence, sex, stereotyping, etc. Where a research study has encompassed or compared across several media, the findings for effects tend to be inconsistent – some research finds the effects of television to be greater than for games; in other studies, the reverse is found.

Therefore, we would question the argument that people respond to content irrespective of platform. Rather, the evidence suggests that people's response to media content is strongly shaped by the particularities of each medium, making it difficult to generalise across platforms, because:

- Different access conditions and different public expectations (linear/nonlinear, push/pull, chosen on purpose or accidentally, culturally familiar or novel) mean that audiences anticipate and self-regulate their media exposure in different ways.
- Differently regulated content makes it particularly difficult to generalise from research on highly regulated content to content where there is no regulation (e.g. do the levels of violence on regulated, terrestrial television affect audiences in the same way, and to the same degree, as the levels of violence accessible through non-regulated media such as the internet?)
- Broadcast (linear) media can be regulated in relation to the programming/scheduling context of particular portrayals (e.g. violence): this is important, since the context in which potentially harmful or offensive content is portrayed has often been shown to make a difference to media effects.⁴ Yet both narrative/programming contexts and temporal/scheduling contexts are difficult to regulate for new (non-linear) media, especially where short extracts are likely to be viewed (e.g. internet, mobile telephony): the consequence is a greater unpredictability of audience response.
- Older media, in the main, comprise professionally produced, mass market content, and this too is different for new media, where a growing proportion of content is user-generated (peer-to-peer, spam, blogging, forms of self-representation), unregulated, niche-content that may be amateur in production and potentially imbalanced.

In short, there are many difficulties with the premise of regulation that is technology-neutral, because the public does not treat different technologies as equivalent, and because the social and cognitive conditions of access also vary. Indeed, research on the conditions under which people access and use media in their daily lives in the UK makes it clear that many contextual variables are important in framing the ways in which people approach the media – prior familiarity and cultural expectations about a medium, the degree of choice or selection involved, the domestic and technological conditions of access, including media literacy (or technological competence and critical awareness), and the presence or absence of an interpretative context or frame (within the text) – all affect how people approach and respond to different media.

If the mythic hypodermic needle had been accurate (i.e. if content was simply ‘injected’ into people), then perhaps we would have concluded that violence is always violence, or advertising is always persuasive, whatever the platform. But, since research persistently shows that many factors mediate between the media and the public, increasing or decreasing the possibility of media influence, for better or for worse, we must conclude that different kinds of harm and offence may result from different kinds of media contents and use.

This is evidently the case even for older media – the findings for television, for example, differ from those for print. One might point to the power of the

image compared with the printed word. Others have argued that film is more potent than television, partly because of the conditions of viewing in the cinema, partly because of the power of a lengthy narrative. Others argue that the daily repetition of short messages on television or in computer games is more influential, or that the interactivity in computer gaming may make effects stronger. These arguments remain unresolved, and few research studies have directly compared the influence of (harmful or prosocial) messages across different media. For new forms of media, the differences are also considerable, and even less is known about them, at present.

Regulation often draws on and is legitimated by reference to a complex base of media- and audience- specific research evidence. The balance to be struck between individuals (often, parents) and institutions (industry, regulators) in managing conditions of access should, we have suggested, vary for more established and newer media. Clearly, as homes become more complex, multi-media environments, and as media technologies converge, it must be a priority to develop and extend the available evidence base, so that we sustain our understanding of the differences across, and relations among, the changing array of media and communication technologies. The challenge is to seek ways of minimising risks, while also enabling the many benefits afforded by these technologies for our society and for the socialisation of our children.

New media, new challenges

One purpose of the present review was to determine what lessons could be learned from research on older media to apply to new media, especially since there is very little research on new media as yet, by comparison especially with research on television. However, such evidence as has been produced suggests that new media may pose some new challenges. In consequence, empirical research on new media is now specifically required.

One of the main differences between many of the established media (television, radio, film, press and even advertising) is that of context (meaning, the framing of a portrayal within the text); when content is delivered in a linear way, it comes with a context that tells a story or establishes a framework of expectations that is recognised by and makes sense to the consumer. The research evidence suggests that this contextual setting affects how the content is received – and accepted – by the viewer. For example, the moral framework of a setting which contains violence will affect how ‘justified’ the violence is considered and, consequently, how it is received.

The newer technologies (including video but also the internet and mobile communications) allow content to be seen out of context. One may see sets of trailers rather than the storyline in which to put the content. There is no research evidence to show how those trailers may be received, although some work on video has shown that certain groups (in this case violent offenders) chose to watch violent scenes repeatedly. It is therefore difficult to project forward the research

evidence from one medium into another. There has been research undertaken on specific areas within internet use, especially areas thought to be harmful to the young such as pornography, anorexia sites or suicide sites. Many of the concerns raised by these studies (and popular discourse) are being applied to the mobile telephone. The evidence is not available to support this view, and it may be argued that the mobile telephone is quite a different technology, with particular characteristics. The chief of these is the personal and private nature of the mobile handset, quite different from a computer that may be shared or accessed by a number of people, or a fixed line telephone.

While the content issues often remain the same (e.g. violence, pornography, stereotyping), the new media allow faster and more convenient access to these contents. They also allow access to more extreme content that would previously have been difficult to access; there are few effective controls available or in use to prevent such access, including by children. The newer media offer greater opportunity to self-select. In terms of the way in which offence is caused there is some research evidence to show that self-selection makes a difference to the way in which content is perceived – people are far more likely to be offended by content on free-to-air channels than they are to content available on a niche channel that they themselves have selected, that is clearly signposted and that they are paying a subscription for. Similarly, some of the research into video games suggests that the self-selecting and active nature of playing may act as a distancing mechanism from the content in a way that passive viewing of television does not. Another key difference that the newer media bring is the ability to produce and widely disseminate user-generated content which has little or no regulation applied to it. The flexibility offered by camera telephones, with both production and diffusion capability, is quite different from hand held video cameras. Similarly, the technologies can be linked so that images from mobile cameras can be downloaded on to the internet and disseminated well beyond one's address book. However, there is little research into these areas as yet.

The importance of conditions of access

Conditions of access strongly influence the research agenda. Television, generally free to air services, is the most researched medium and has received such attention because of its ubiquity and accessibility, because it is a linear (i.e. push) medium, and because of its positive public potential (i.e. there is no real option for audiences to switch it off without missing out). The internet, the newest focus for research, partly merits research attention because of the ambition of ubiquity and public value – again, in an information society, it is increasingly not an option for people not to use it. As a largely unregulated medium, the internet could provide access to a much greater range of potentially harmful and offensive content. This limits the applicability of findings from research on highly regulated media (such as television) to the internet. However, the strictures of research ethics limit the potential to conduct research for this new medium.

Research on the internet, unlike that for television, makes a fundamental distinction between potentially harmful material accessed accidentally and that which is sought deliberately. However, it is not clear whether this makes a difference to the degree of harm caused, though it does suggest different types of user or motivations for use (e.g. the child who seeks out pornography online may differ from the child who is upset because they found it accidentally: however, too little is known about user motivations or the consequences of different kinds of exposure). For material accessed deliberately, attention has instead centred on the user's motivations, with evidence suggesting that the search for violent or pornographic contents may contribute to the psychological disturbance for certain individuals. However, for both adults and children, some research suggests that, irrespective of whether content is found accidentally or deliberately, harm may still result (especially from violent pornography). Similarly the paucity of research for mobile telephony rests in part on the relative novelty of the technology. This means that research from the internet is being used to make assumptions about the possibility of harm and offence in this area; whether or not this is valid remains to be seen.

At present, research finds that filters and other (physical) access control mechanisms are rarely used by users or, in the case of children, children's guardians. This seems not to be because people are not concerned— it is evident that the internet especially occasions the greatest concern of all media among the public. Rather, it is because people lack the knowledge and awareness of how to choose, install and use access controls or they feel such mechanisms are not necessary within their own families. Within the UK's Code of Practice for on-demand services, for example, the use of PIN codes and other access management systems are repeatedly advertised and marketed to the user.

The evidence suggests that the children's response to certain media contents can be lessened or heightened by the ways in which families interact and discuss what is seen. Evidence is lacking, however, for the claim that an increase in media literacy will reduce the potential for harm, although this is widely believed (and so should be the subject of future research). We have noted that the evidence for possible harm from violent content is stronger than that for sexual content (with the exception of violent pornography). This might explain why in response to portrayed violence, the public is more likely to call for content regulation, while for portrayed sex, people may or may not object personally but they tend to call for tolerance (respecting the rights of others to view diverse or niche content); the right to view violence appears more difficult to defend, it seems, than the right to view pornography. Given this, it is curious that most research on new media contents have addressed sexual content (especially pornography) rather than violence, there being particularly little on the potentially harmful effects of exposure to non-sexualised violence (this may reflect the ways in which public concern, rather than theory, sets the research agenda).

Looking to the future

The issue of common definitions remains. The concept of ‘harm’ is implicitly understood but rarely formally defined. Hence, it is not possible to provide clear advice or a check list to regulators or content providers about specific harms. However, the concept remains a valid one; it has a legal foundation and attempts should continue to be made to define and identify it. The concept of offence is more clearly understood. While there is little academic research into this area (though we note the substantial body of regulators’ work related to offence, plus the potential of such circumstantial evidence as complaints and other participatory expressions).

The research evidence also suggested some links between offence and harm. In reality-defining effects, for example, on the one hand, opinion research (on offence) shows that certain groups resent their representation in the media; on the other hand, experimental and survey research (on harm) suggests that media representations perpetuate such stereotypes among the general population. Another borderline area between offence and harm concerns user-generated content – racist or sexist messages are offensive to some and harmful to others in ways not yet well understood; nor is it yet understood how processes of offence and harm differ when the message source is a peer rather than a powerful broadcaster, for example. Some of the research also pointed to the crucial role of the media in creating an informed civil society and suggested that this role will need to be monitored, particularly as the information environment expands and innovates faster than the public’s critical literacy (to determine reliability or authenticity of information) can keep up.

In general, this literature review has shown that the evidence for harm and offence caused is constantly qualified and such contingent answers do not make life easy for regulators, policy-makers or the industry. Nonetheless, when dealing with complex social phenomena (violence, aggression, sexuality, prejudice, etc.), many factors – including but not solely the media – must be expected to play a role. Given the complexity of this field of research, we would urge researchers and policy makers to ask specific questions of the evidence base, as follows:

- What specific social, cultural or psychological problem is at issue?
- Which media contents are hypothesised to play a role?
- Which segments of the public give rise to concern?
- What are the strengths and weaknesses of the research methods used to generate the relevant evidence?
- Under what conditions are these media contents being accessed in everyday life?
- What kinds of risk, and what scale of risk, does the evidence point to, if at all, and for whom?

- Given a public consensus in favour of proportionality in regulation, what kinds of intervention, and by whom, are most likely to be effective in reducing the risk, and what advantages and costs might be associated with this?

There is a growing call for arguments that go ‘beyond cause and effect’, as more and more commentators are frustrated by the simplistic polarisation of censorship versus freedom of expression or regulation versus *laissez faire* (depending on one’s position). Boyle (2000) argues, for example, that the pornography debate must be reoriented towards addressing male violence in society, rather than distracted by arguments over experimental methods. In a similar vein, Adams (2000) draws on philosophical as well as legal arguments to argue that the claim that pornography plays a causal role in rape does not, or should not, ‘let the rapist off the hook’. Rather, multiple causes are at work, as they are in many domains of life, and the assertion that pornography plays a causal role does not in any way assume that pornography is the sole, or main, cause and nor that it works in the same way on all its consumers; consequently, ‘evidence’ for the effects of pornography need not be large or consistent.

Similar arguments have been advanced in other domains. For example, in relation to advertising of foods high in fat, sugar or salt to children, Livingstone (2005) argued that the problem with causal claims is not the question of causality *per se* but the nature of the question asked (see also Gauntlett, 1998). Instead of asking whether advertising causes children to make unhealthy food choices, the question should be turned around to ask: what are the influences on children’s food choice and what role if any does advertising play in this multifactorial explanation?²⁵ Kline (2003) develops this approach through taking a public health approach: ‘rather than the causal hypothesis, the driving force behind the risk factors approach is the quest to understand what it all depends on’. Research should, therefore, focus more on establishing the range of relevant factors contributing to an outcome, identifying how important each is in explaining that outcome.

So, it is more useful, we have suggested, to turn the question around and ask not whether the media harm children but ask instead, of the many causes of particular social ills, what role do the media play? This more contextualised approach is increasingly adopted by those who are looking at vulnerable groups, in particular, and argues for a more public-health facing approach, which advocates the examination of the media’s role (and the amenability of media exposure to intervention) as part of a more complete picture of influences and effects (see, for example, Browne & Hamilton-Giachritsis, 2005; Kline, 2003; Savage, 2004). Editorial context has always been important in content regulation guidelines, but it may prove difficult to build into parallel guidelines for new media. Since it appears, from research on children’s accidental exposure to pornography on the internet, that unexpected and decontextualised content can be particularly upsetting, this poses a challenge for regulators.

The future research agenda

A key aim of this review has been to pinpoint gaps in the existing evidence base. As a result, we identify the following priorities for future research:

- Research on the range of marginalised and/or vulnerable groups (including the elderly, gay, ethnic minorities, and those with psychological difficulties). Too often, the population is not adequately segmented: beyond examining differences by age and gender, research must include ethnicity, sexuality, psychological variables, and so forth when investigating possible harm and offence; even for age, too little is known about the effects of media on different age groups as children develop.
- Research on reality-defining/stereotyping effects that relates to recent changes especially in nationally-originated media content, as well as imported content.
- Longitudinal or long-term panel studies, to follow up the effects of short-term harm, to track changes in levels and kinds of offence, and to identify changing expectations and understandings of media (including the access conditions) among the public. At present, most if not all longitudinal studies of media influence are US-based, though there are tracking studies on media access and use in other countries. The lack of studies of media influence, incorporating content variables that allow replication over time, makes it difficult to examine in combination the matrix of content viewed (amount and type), media platform, personality traits, life stage and other demographic variables.
- In the shorter term, there is strong evidence that triangulated methodologies, bringing together different data collection systems, may work most effectively to give an insight into the way in which the media and users interact, but these too, need to be combined more effectively with other variables, such as those affecting personality. Some methods have been particularly creative – the use of citizens' juries, for example, or the development of the news editing method – but these tend not to be reused, perhaps because they are more effortful or expensive; nonetheless, they reap dividends in terms of research insights.
- Research on the under-researched media, particularly radio and music among the 'established' media and the internet and mobile telephony among the newest delivery systems. For example, music attracts some concern over its lyrics, yet has barely been researched in this regard. As the content available even on familiar and well-researched media changes and diversifies, research must continue to track the possible consequences.
- Research on the new issues arising from new media, particularly in relation to user-generated and malicious peer-to-peer content and contact. For example, research is beginning to accumulate on the harm and offence caused

particularly by unwanted and unsought exposure to inappropriate material on the internet: this agenda must now be extended to include mobile and other emerging digital platforms (research from the advertising literature suggests such effects not only occur but may be harder to defend against). Similarly, little research has examined the effects of interactivity, for example, on the way in which content is chosen and received (note that it is not clear as yet that the active selection of content makes a difference to media effects). Further, research on the commercial or promotional aspects of new media technologies (especially internet, mobile, other new and interactive devices) and new contents (interactive content, new forms of advertising and promotion, niche/extreme content).

- Research that puts media effects in context, seeking to understand how the media play a role in a multi-factor explanation for particular social phenomena (e.g. violence, gender stereotyping, etc.), this to include a comparative account of the relative size of effect for each factor (including the media) in order to enable regulatory decisions based on proportionality.
- Research that directly compares the public's responses to the 'same' content when accessed on different media (e.g. violence on television, in film, in computer games, online) so as to understand whether and how the medium, or the conditions of access to a medium, including the regulatory environment, make a difference. Although it seems clear that the public brings different expectations to different platforms and technologies, as noted earlier, more research is needed on how they respond to the same content when delivered through different media platforms.
- Research on the range of factors that potentially mediate (buffer, or exacerbate) any effects of media exposure (e.g. level of media literacy, role of parental mediation, difference between accidental and deliberate exposure, etc.). Particularly, to inform the regulatory agenda, research is needed to produce a clearer understanding of how regulation can work with other mitigating or buffering processes (such as family mediation or communications literacy) to reduce any negative impact of inappropriate media content. Research on the range of possible mitigating factors remains patchy, being mainly focused on television, and must be updated as users (especially parents) continue to adjust to the changing media environment.
- Similarly, users need to understand how, and when, they can use the self/in-home regulatory tools they are provided with by many of the new delivery systems, such as filters or PIN codes, and more research is needed on whether and when these are effectively used, and why they may not be.

It must be acknowledged that calling for multimethod, long-term, cross-media, culturally-relevant research on a diverse range of audience/user groups is to call for expensive research. Just as regulation increasingly requires a multi-stakeholder

approach, it may be that research also requires the cooperation of government, regulator and industry groups, together with the expertise of the academic research community. Finally, we would stress the importance for evidence-based policy and academic knowledge of sustaining a body of research that is culturally- or nationally-relevant, that is up to date, that has undergone peer-review, and that is available in the public domain.

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Notes

1. Note, however, that we did not encompass research evidence for the positive or pro-social benefits of the media, nor other issues of public health currently being debated, such as the potential for physical harm caused by media content triggering epilepsy for example, or the possible effects of using mobile telephone handsets.
2. To call these 'objective' and 'subjective' measures is perhaps too simple, for the judgements of observers are subject to biases (being a form of self report, and influenced most notably by the third-person effect), and the judgements of individuals concerned may be the only available method (how else can fear be assessed?). Of course, there are some studies that rely on self-report for evidence of harm, especially when the harm at issue is emotional, as there are some studies of offence that rely on more objective measures (e.g. letters of complaint).
3. Several studies show greater media effects for already-aggressive participants. Others have shown greater effects of exposure to media violence among clinical populations (Browne & Pennell, 2000). Findings for offenders are more mixed: see Hagell and Newburn (1994) but also Browne and Pennell (2000) who argue that it is the violent backgrounds of young offenders that creates the vulnerability. Among children and young people, the most studied groups, cognitive and social development accounts for different (and various) findings. In many studies, especially of violence, the effects are found to be less, or even absent, for girls. Further, many American studies show different (and various) results for participants of different ethnic backgrounds.
4. Perhaps curiously, both psychological and culturally-oriented researchers agree on the importance of textual (or programme) context, arguing that a violent or sexual act must be interpreted in relation to its narrative and genre context and, more importantly, that people indeed do interpret content in context, this affecting how they respond to content and whether it upsets or influences them.
5. For an influential illustration, in the field of children's food choice and obesity, see Story, Neumark-Sztainer, and French (2002). In an approach that could be applied also in other domains, they suggest that the factors influencing food choice operate at four distinct levels. (1) Individual – psychosocial, biological and behavioural factors. (2) Interpersonal – family, friends and peer networks. (3) Community – accessibility, school food policy and local facilities. (4) Societal – mass media and advertising, social and cultural norms, production and distribution systems and pricing policies.

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