The effects of sexual, sexualised and sadistic violence in the media

A review of the research literature

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A report for BBFC

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Key findings:

- There is a dearth of any focussed research which could be helpful in developing classification guidelines. The most relevant studies are those commissioned by the BBFC.

- Debates surrounding media effects are notoriously controversial. Where effects are claimed, it is not possible to determine if these are stronger with film than any other media. No studies discriminate adequately between the various content and media under investigation.

- While the majority of studies claim some harm from mediated sexual violence, there are grounds for scepticism over the quality of the evidence and whether it shows cause and effect.

- Very little research has been conducted in the last decade on the effects of media sex and violence with the exception of that on the internet and on video games where evidence remains highly controversial.

- Most studies identified by the key words search fell under pornography. Here, meta-analyses show an uneven and weak pattern of results, with most claiming only 2-3% of the variation in sexual aggression might be 'explained' (statistically) by pornography use.

- Many scholars suggest that there may be ‘high risk’ groups who are especially vulnerable to media influences. Malamuth in particular claims that those with rape proclivity are at risk of being made more sexually aggressive by pornography.

- In a large survey, high risk individuals who frequently consumed soft-core pornography were four times higher in their sexual aggression scores. However, the above results may not be reliable since these individuals made up less than 1% of the sample. As is usually the case, the evidence is only of an association and not of cause and effect.

- Research on sexual offenders has not confirmed an undue effect of sexual material. Rapists may show greater arousal to coercive sex scenes than controls but this does not indicate cause and effect.

- Attraction to and enjoyment of violence and pornography is greater in those who are: male, low in empathy and intelligence, high in trait aggression and score higher on the trait of psychopathy.

- Most effects studies use undergraduate students (mainly in psychology) earning course credits. This is a potentially major source of artefact.

- Internationally, recorded crime rates have fallen at a time of increased availability of sexually violent materials - especially through the internet. However claims of media inspired crimes are inadequately investigated.

- There are major gaps in knowledge about sexual or sadistic or even graphic
violence in the media. The most notable lacks of analyses are of:

- Claims about media inspired/copycat crime.
- The impact of cultural varieties in films and in audiences.
- Media roles in the development of deviant thoughts.
- The extent to which beliefs evoked by films perseverate.
- Where audiences draw the line of acceptability in media portrayals.

**Recommendation**

Given the lack of any conclusive evidence which could sensibly inform a film classification body, the recommendation is that the BBFC builds on its earlier pioneering research and existing knowledge to identify more clearly where UK audiences now draw the line in terms of perceived harm and acceptability of depictions of sexual, sexualised and sadistic violence.
Introduction
Although this review focuses on publications in the last decade, it has been informed by a comprehensive analysis of earlier research. It appears to be unique in its goal to examine the research literature for signposts which might help refine guidelines for film classification. Close perusal of a vast number of studies failed to reveal any such signposts. This must be a serious indictment of social science research. Astonishingly, the only directly relevant research identified was that commissioned by the BBFC (notably studies by Barker and by Cumberbatch). Despite using a wide variety of search terms, most of the studies captured in the trawls were focussed on pornography.

The overriding deficiency in the research literature is that little attempt is made to differentiate between different kinds of content in different kinds of media. For example, a number of studies claim to have found harmful effects of exposure to sexual violence in the media. But essentially similar claims have been made based on such diverse media as: written stories; audio tapes; tape-slide sequences; television; rap music; music videos; box office films; top shelf magazines; hard-core videos; the internet; video games. Similarly, it is difficult to appraise what ‘sexually violent’ content can entail in studies when the content ranges from newspapers and day time soaps through ‘slasher’ movies to mainstream pornography and sundry other material of dubious legality (for example involving suffering to animals).

Terms such as ‘extreme’ and ‘graphic’ are used so generously in the published research literature that they proved of little value in identifying the kind of material which a film classification body might consider extreme or problematical. Of course, in the case of surveys, nice distinctions concerning the media predilections of participants cannot be simply achieved. However the puzzle is that distinctions are so rarely attempted and measures of media use are for the most part quite simplistic. Ecological concerns apart, discrimination between the various media and types of representation are, of course, essential for policy deliberation.

In view of the considerable attention given to the study of pornography, it might be expected that this term at least would have been honed to clarity, with some consensus on the types of material which may be considered more or less acceptable. However this is far from being the case. Consider the following two recent examples provided in the same year by one of the most prolific researchers in the field - Neil Malamuth.
In the first study, Hald and Malamuth (2007) provided their participants with (eP3) ‘a standardised definition of pornography’ which read:

‘Any kind of material aiming at creating or enhancing sexual feelings or thoughts in the recipient and at the same time containing explicit exposure and/or descriptions of the genitals and clear and explicit sexual acts, such as vaginal intercourse, anal intercourse, oral sex, masturbation, bondage, sadomasochism, rape, urine sex, animal sex etc’.

However, in the same year, Vega and Malamuth (2007) published a study where the only measure of ‘pornography consumption’ was the frequency of reading just three magazine titles: Penthouse, Playboy and Hustler. The authors attempt to justify this, writing (page 104):

‘Typically sexually explicit magazines and other media contain a variety of types of pornography that viewers attend to. Since research has indicated that if distinctions are made, the sexually violent content has more powerful effects, the fact that we are assessing consumption generally without such distinctions probably “stacks the cards” against finding a significant effect. If significant associations are found, therefore, it is particularly likely that an even stronger association would be found with sexually violent content only [for a review see Malamuth et al, 2000]’.

Vega and Malamuth’s textual reference to Malamuth et al 2000 is perhaps apposite since this earlier study opens with (page 26):

‘Anyone reading some of the recent reviews of literature on the effects of sexually explicit material would have to be perplexed’.

It can only confuse matters further when titles such as Playboy are taken as proxy for violent pornography. These titles have usually been considered merely ‘top shelf’ erotica or ‘softcore’ material since they do not even show ‘clear and explicit sex acts’. However, the commonsense distinctions which might be quite central to film classification seem unimportant in the above research. Malamuth et al (2000) reveal their logic (page 28):

‘For instance, most sexually explicit magazines containing some sexually violent content also include much sexually nonviolent content [ref] and it is typical for the consumers who view the more “extreme” type of stimuli to also consume the “milder” content [ref]. Moreover individuals who are prone to sexual aggression may form violent fantasies using sexually nonviolent depictions [ref].

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1 eP refers to the page number of an electronic version as provided by an author.
This is quite unhelpful. There is no escaping the fact that these studies use quite inadequate measures of media use where just one question was asked about the key variable of pornography compared with more than 127 for the remaining battery of items.

As all the above suggests, the collective research body does not encourage confident conclusions about the kinds of material under review let alone its acceptability to the public and any potential harm perceived or claimed. There are serious deficiencies in our knowledge and far more attention needs to be given to assembling evidence relevant to an informed debate and for policy development. Epistemological concerns surround most statements about the media and harm, most of which are essentially speculative.

**Controversies**
The effects of sex and violence in the mass media have been a source of continuing controversy both within and outside academic communities. This has been true of each medium covered over the years and all of the issues investigated. Four decades ago claims began that ‘an increasing weight of evidence’ was accumulating on the harms caused by sex and violence in the media. Similar claims are made today and yet current disagreements are more adversarial than ever.

There is a considerable body of evidence dealing with the effects of media content - especially that which is either violent or sexual or sexually violent. It is fair to say that the majority of empirical studies claim some evidence of harm. However, critics question what the evidence really shows, pointing out the limitations of the research endeavours both conceptually and in their own terms.

Proponents of the media cause harm view seem to have become increasingly convinced of their case and in a number of recent publications have cast aspersions on those who question the evidence. Murray et al responded to a review by Hall et al (2011): A plea for caution which had argued that the evidence for the harmful effects of video violence was ‘weak and confused and inconclusive’. Murray et al (2011) riposted with: A plea for concern, describing Hall et al’s article as ‘foolish’.

Huesmann (2010), a pioneer researcher on the effects of media violence, reasserted his case that it was harmful in an article entitled: ‘Nailing the coffin shut’. This was written in support of a meta-analysis of video game violence effects by Anderson et al (2010) which concluded that harm had been demonstrated. He acknowledges a recent meta-analysis by Ferguson and Kilburn
which reached the opposite conclusion but does not mention that by Savage and Yancey (2008) which argued that media violence had no effect on criminal behaviour. Huesmann concluded – referring only to the Anderson review - (page 179):

‘Yet the results of meta-analyses are unlikely to change the critics’ views or the public’s perception that the issue is undecided because some studies have yielded null effects, because so many people are concerned that the implications of the research threaten freedom of expression, and because so many people have their identities or self-interests closely tied to violent games’.

Some critics offer robust criticisms of the research tradition as defended by Huesmann. For example Grønstad (2008) writes (page 26):

‘Various kinds of empirical studies form the hegemonic school of research on film and television violence. Though internally diverse, what unites these approaches is their share basis in either the social sciences or in psychology, their emphasis on quantifiable evidence, their concern with the potentially undesirable effects of screen violence on the audience (children and adolescents in particular), their affiliation with politically instituted research initiatives, their reductive use of primary texts and the concomitant refusal to engage with films holistically, the artificiality of their experimental conditions, their frequently moralistic and censorial overtones, their vast underestimation of the viewer, and, finally, their notorious inconclusiveness.’

Such writings flag up the difficulty of offering an impartial review of the often quite ill tempered perspectives in these debates. Byron (2008) acknowledged the difficulty in this (page 151):

‘There is little middle ground to be found in this debate. It is difficult to base policy decisions on such polarised research’.

The task of this review is more specialised than that faced by Byron. It is not simply to weigh the evidence on the potential harm of different media, but to glean the sources for evidence to discriminate particular kinds of violence such as sexual, sadistic and graphic. This is where the research literature is at its thinnest. Fortuitously, while this review was being prepared, the Supreme Court of the United States (2011) ruled on legislation aimed at controlling violent video games. Mutatis mutandis, ignoring its focus on children, The Court’s deliberation seems to parallel that reached here, (page 2):
Psychological studies purporting to show a connection between exposure to violent video games and harmful effects on children do not prove that such exposure causes minors to act aggressively. Any demonstrated effects are both small and indistinguishable from effects produced by other media. Since California had declined to restrict those other media, e.g. Saturday morning cartoons, its video game regulation is wildly under inclusive, raising doubts about whether the State is pursuing the interest it invokes or is instead disfavouring a particular speaker or viewpoint.

As noted earlier, the majority of studies identified were of the effects of pornography. In recent years an important development in the art of literature reviewing has been the science of meta-analysis. This statistical method seeks to combine the results of many studies into one large study. It means that a plethora of different conditions and measures are added together to create a single measure of overall effect. In the last decade there have been a number of such reviews of the effects of sexual violence. Sadistic and sexualised violence have been quite neglected.

**Non-offender populations: Meta-analyses of the effects of pornography**

*Oddone-Paolucci et al (2000)* included 46 studies in their meta-analysis of the effects of pornography. The authors classified material as either ‘mild’, or ‘explicit’ or ‘violent’ pornography but do not provide a breakdown of the results. They concluded that the effects of pornography were negative, producing 20-30% higher scores compared with control groups on: ‘sexual deviancy’ (which included age of first intercourse); ‘sexual perpetration’ (such as coercive behaviour); ‘rape myth acceptance’ (such as believing that rape is normal) and ‘intimate relationships’ (which appears to include viewing persons as sexual objects). Notably, the authors observed that some ‘moderator’ variables were identified. These included gender and type of pornography but no details are given. More curiously, they decided that these moderators were ‘probably artefacts’ and do not pursue analysis further.

*Allen et al (2000)* covered similar ground to conclude (page 141):

‘The “smoking gun” evidence necessary to establish a causal connection between exposure to pornography and anti-social outcomes is currently lacking in the scientific literature’.

*Mundorf et al (2007)* reported a meta-analysis of ‘more than 2,200 manuscripts’ dealing with sexually explicit media. Surprisingly, the most recent study was dated 1993. Happily, in this study, a more conventional correlation coefficient figure $r$ was used to describe the overall results. Such coefficients vary from
zero to 1 and indicate the strength of an association (from non-existent to a perfect correspondence). When squared and multiplied by 100 they reveal the percentage of variance explained statistically. For the non experimental studies, such as surveys, there was a very weak correlation of almost zero between exposure measures to pornography and the attitude measure of Rape Myth Acceptance (at +0.056). Here no breakdown was given for the type of sexual materials studied. Experimental (mostly laboratory type) results were somewhat stronger at +0.146 – i.e. just 2.1% (of the variability in attitude) could be predicted by exposure to pornography. In the case of experiments, results were similar for both violent (+0.112) and non violent (+0.125) sexual material. Interestingly, educational materials were also included in this analysis. These included things such as debriefing the participants about the study. Such interventions were more than effective in eradicating any harmful effects (+0.216) of exposure to sexual materials.

For numerous reasons, experimental studies where participants are shown pornographic material have largely disappeared in recent years. The most recent meta-analysis of survey type studies is by Hald et al (2010). This concluded that the overall correlation between pornography consumption and attitudes supporting violence against women was +0.18. Non violent material was lower (at +0.13) than violent (+0.24). This last figure corresponds to almost 6% (5.76%) of the variability in these negative attitudes being ‘explained’ (statistically) by measures of violent pornography use.

Comment: Most correlations are small and do not indicate the direction of the relationship. The classic difficulty is identifying whether the media are a cause or a product of sexual aggression - root or fruit. It would not be surprising if those with negative attitudes to women were more attracted to violent pornography than loving erotica. Additionally, the methodology of meta-analysis does not overcome weaknesses in the design of the original studies. Finally, even the most recent of these analyses includes only three empirical studies carried out since 2000: Emmers-Sommer & Burns, 2005 (on internet pornography); Lam & Chan, 2007 (again on internet pornography) and Vega & Malamuth, 2007 (on top shelf magazines).

Non-offender populations: Literature reviews

Harris and Scott (2002) concluded:

‘Although there are some documented negative effects of nonviolent but dehumanizing pornography, especially on attitudes to women, the research is particularly compelling in the case of violent pornography’ (page 325).
Malamuth and Huppin (2005) suggested that the evidence of associations between pornography and aggressiveness towards women could be explained by a circular relationship. In this:

‘…aggressive males are drawn to the images in pornography that reinforce and thereby increase the likelihood of their controlled impersonal and hostile orientation to sexuality’ (page 324).

Hald (2006) summarised the evidence:

‘A large number of studies have investigated the effects of pornography on non-criminal adult populations [refs]. However, few or no adverse effects of pornography have consistently been found across studies and individuals’ (page 578).

A review by Itzin (2007) decided that the research:

‘...supports the existence of some harmful effects from extreme pornography on some who access it. These included risk of developing pro-rape attitudes, beliefs and behaviours and committing sexual offences’ (page iii).

The most recent review of the research literature (Diamond, 2009) completely rejected the idea that it supported concerns about pornography, concluding that sexually explicit material is ‘without evidence of harm’ (page 312). As winner of the 2011 Kinsey Award for the Scientific Study of Sexuality, Diamond was interviewed by Scientific American where he controversially insisted: ‘There is absolutely no evidence that pornography does anything negative’ (Moyer, 2011, page 14).

Two additional reviews commissioned by the regulator Ofcom had a narrower focus on the evidence of harm to minors from exposure to R18 sexual material. These comprehensive evaluations of the literature by Helsper (2005) and by Cumberbatch (in press) both concluded that there was no conclusive evidence of any deleterious impact.

Comment: The great majority of research reviewed by these authors is from an earlier period. In total, these various reviews (except for Cumberbatch, in press) identified only 5 studies since 2000. Thus, disagreements are essentially about the same evidence.
Non-offender populations: High risk groups

Many authors suggest that audiences will not all be harmed by sexually violent material, but that certain people might be - such as those who are predisposed to violence against women. If true, this would help explain the rather uneven evidence of harm in the existing literature. The most successful theoretical approach to sexual aggression includes hypothesised ‘high risk’ groups. This is the ‘Confluence Model’ developed by Malamuth over a period of years. The most comprehensive account of and support for this model is provided in an exceptionally lengthy (65-page) journal article (Malamuth et al 2000). The model assumes that sexual aggression is the outcome of various factors including personality traits - especially Sexual Promiscuity and Hostile Masculinity. Malamuth suggests that individuals high on these traits will be attracted to pornography which then reinforces their already hostile attitudes and behaviours.

This 2000 publication included a large survey (N = 1713) of 21 year-old college students. It measured various personality traits and exposure to soft core magazines. Participants were asked: ‘How often do you read any of the following magazines: Playboy, Penthouse, Chic, Club, Oui, Forum, Gallery, Genesis, or Hustler (Check One). This was followed by a scale: Never (1); Seldom (2); Somewhat frequently; (3) Very frequently.

The results showed that ‘pornography’ use correlated only weakly with sexual coercion (+0.09). In the statistical analysis when all the traits were included as a predictor of sexual aggression, pornography added ‘about 1%’ to the model (page 73).

‘But among those at the highest ‘pre-disposing’ risk level for sexual aggression (a little above 7% of the entire sample), those who are very frequent pornography users (about 12% of the high risk group) have sexual aggression levels approximately four times higher than their counterparts who do not very frequently consume pornography’ (page 85).

Similar results were reported by Vega and Malamuth (2007) - again based on top shelf magazine reading.

Comment: Note that causal relationships remain elusive and could go in either direction. Moreover, it could be that other traits which were not measured - such as ‘sensation seeking’ - drive both pornography use and sexual aggression. There were only 27 males in Malamuth’s ‘high risk’ pornography group - accounting for just 0.84% of the total sample. With such a small proportion, the reliability of the findings might be in doubt. The measure of pornography use is
cursory and narrow – it is a puzzle that sexually violent materials were not covered. Nevertheless, the Confluence Model is ideal for developing further to embrace additional variables - such as peer group culture, alcohol abuse and so on. It has been praised by many, including forensic psychologists such as in Beech et al (2006), for its elegance and clinical utility. However, they have some reservations, claiming it ‘exhibits a poverty of explanatory depth resulting from generally vague and unspecified mechanisms’ (page 93) and seem unimpressed by the role of pornography in sexual offending since the forensic team do not even mention it in their review.

**Offender populations: Reviews of pornography and offenders**

*Allen et al (2000)* included 13 studies of offender groups in this meta-analysis. There was very little difference between sexual criminals and non-criminals in the use of explicit sexual materials (+0.062) or frequency of use which showed a slight negative correlation (-0.054). This suggests that the sexual offenders use sexual materials slightly less often but this must be treated very cautiously. The finding was the same for the age of first use of pornography (+0.025), demonstrating no support for the concern that early exposure led to sexual offending. The final analyses revealed differences between this group and the controls. They showed higher sexual arousal to pornography (+0.152), especially rape themed materials (+0.388), and much lower arousal (-0.258) to consensual sex material. The strong response to rape themed material is striking. But once again, the statistic does not show a causal relationship – merely that rapists are aroused by rape. Allen et al concluded:

‘The problem is that the current state of theoretical development for these issues does not provide an explicit model for the connections among cognitive, emotional, and physiological impacts of pornography on the individual’ (page 142).

*Seto et al’s (2001)* review, *The role of pornography in the etiology of sexual aggression*, also emphasised the equivocal nature of the research:

‘Since the first large-scale public inquiry into pornography by the US Commission on Obscenity and Pornography (1970) there has been vociferous debate about the potentially harmful effects of pornography. Over a quarter of a century later, after at least five other major government inquiries, as well as many scientific studies, the evidence for a causal link between pornography and sexually aggressive behavior remains equivocal’ (pages 35-36).

*Bensimon (2007)* observed that a number of studies have produced circumstantial evidence to indict pornography - such as offenders masturbating
to pornography before a sexual attack. However, acting out may be driven more by past experiences of offending.

'Research concerning the use of pornography as a precursor to sexual offending has yielded mixed results...while the debate rages on regarding the potentially damaging effects of pornography, there is consensus on one point: the availability and consumption of pornography does nothing to mitigate the likelihood that consumers will sexually offend' (page 95).

The most recent review subtitled *Theoretical perspectives and implications for the treatment of offenders*, is by *Kingston et al (2009)*. It is quite comprehensive and draws attention to the finding that those with high scores on measures of ‘hyper masculinity’ and a history of sexual aggression show more sexual arousal to a variety of sexual photos. One of the co-authors is Malamuth and so perhaps it is not surprising that the argument is that frequent use of pornography is a risk factor for those with a proclivity to commit sexual aggression. However, the review does not discriminate sexually violent materials and, indeed, in the assembly of evidence of harm, generously cites various studies which are quite marginal such as those dealing only with television fare.

**Comment:** A number of the findings point to sexually aggressive offenders showing exceptionally reactive responses to such material. This may be useful for diagnosis, treatment and risk assessment. However, as elsewhere, evidence that offenders are changed by exposure to sexually violent material or that it increases their probability of offending remains illusive.

**Offender populations: Research on offenders**

While at first sight research on incarcerated offenders appears easy to achieve, this is far from being the case and the main imperative has been to assess the risk of recidivism rather than the aetiology of offending. However there is much in the literature to suggest that the media could play a potential role in offender thinking. Accounts of serial killers such as Ian Brady and Fred West often reveal an interest in deviant media. Since MacCulloch first drew attention to a pattern of sadistic fantasies which propels sexual criminals into compulsive behaviour, attempts have been made to illuminate their role further. *Kingston & Yates (2008)* reported that violent sexual fantasies are a feature of sexual sadists, but that (page 241):

‘Assessment of sexual sadism is fraught with problems related to definitions of the disorder, application of diagnostic criteria, reliability of the diagnosis and the applicability of common actuarial assessment methods’.
Nitschke et al (2009), in a sample of 535 high security male inpatients, found that severe sexual sadism was far more prevalent than thought – two thirds of those the authors diagnosed had not been previously identified. Even apparently objective techniques such as penile plethysmography did not reliably distinguish them. For example, Marshall et al (2002) even observed greater deviant arousal in non-sadists. More generally, a significant proportion of offenders seem able to suppress penile responses thus eroding confidence in such methods to discriminate offender types (Kalmus & Beech, 2005).

Egan et al (2003) reported (pages 60-61):

‘One of the outstanding features of the histories of some of the more serious offenders is ‘sensational interests’ (topics of a lurid, morbid or sensational nature). From a clinical/forensic perspective it seems vital to be aware of the individual’s context and behavioural alternatives to determine whether the person’s sensational interests reflect underlying sadism, idiosyncratic interest or a transient and ephemeral curiosity’.

As the authors observed, forensic patients may appreciate that confessing to a compelling interest in black magic or sexually violent imagery might not impress a Mental Health Tribunal.

This is perhaps one explanation of the failure to find any link between pornography and crime type in the most recent research by Burton et al (2010) which was a large study of male adolescent sexual abusers (N=283) compared with a sample of non-sexually offending youths (N=170). Exposure to pornography was correlated with all the non sexual crime scores but (page 126):

‘The literature supports an assessment of psychopathy as a moderating variable in the relationship between pornography and sexual aggression. However, due to the fact that no relationship was found between sexual aggression and any of the sexual aggression variables, this conclusion is simply not supported in this study.’

Although there exists a considerable literature on offenders, there are only a few pointers to some distinguishing features which might be relevant to this review. However, perhaps the search for criminogenic experiences may inevitably be frustrated if, as Ferguson & Beaver (2009) suggest, the roots of criminal violence are strongly genetic. In any case, many studies point to patterns of deviant behaviour being present (if not developed) during a child’s formative years.
Welfare & Hollin (2011) review the literature on the involvement of young people in extreme violence, suggesting that trauma very early in life can be one explanation. They note that some estimates of childhood abuse in developed countries can be as high as 16% and that (page 10):

‘These children tend to behaviourally re-enact their traumas either as perpetrators in aggressive or sexual acting out against other children, or in frozen avoidance reactions.’

Tremblay (2008) follows a similar argument in reviewing the development of aggression from early childhood:

‘Longitudinal studies have shown that it is extremely unlikely that an adolescent who has not been highly physically aggressive will manifest significant problems of physical aggression….Contrary to traditional belief, children do not need to observe models to initiate the use of physical aggression’.

While all of the above do little to clarify the role of the media in the lives of such people, the studies do not reveal easy answers to what should be done with sexually violent offenders. Cale & Lussier (2011) remain pessimistic that therapeutic intervention can help much to reduce the chances of sexual reoffending (page 16):

‘Currently the effectiveness of treatment programs designed to reduce sexual recidivism remains a contentious point of debate.’

Comment: Possibly the wide psychological varieties found within any offender group obscure a clearer picture of what relationships exist with sexually violent media. However the growing interest in early child development and increasing evidence of childhood abuse suggests that there is some way to go before an integrated theory of offending is developed.

Crime rates
The premise for many studies in this field is that of real world crime and various concerns about the potential of the mass media to exacerbate this. Usually authors provide some statistics on the prevalence of violence and/or sexual violence both in society and in the media before the study moves on to the particular investigation. For example, the most recent by Kahlor and Eastin (2011) opens with: ‘Nearly one in five US women is the victim of a completed or attempted rape’. In other words, the study addresses a large social problem.
Tseloni et al (2010) reviewed international crime data from 1995-2004 to conclude that all crime types examined fell by roughly the same rate across a sample of 26 countries. A number of studies note that this decline has occurred alongside a dramatic growth in sexually explicit material (especially through the internet) as well as media violence (especially in video games).

Landripet et al (2006) examined data for Japan, Croatia and the USA over a period of several decades, covering the transition from pornographic scarcity to pornographic abundance. They concluded that:

‘...results even corroborate the theory of pornographic substitution, according to which consumption of (violent) pornography may provide a surrogate for violent behavior’.

Ferguson and Hartley (2009) reported an almost perfect negative correlation between the incidence of rape (obtained from the US National Crime Victimization Survey) and the number of pornographic titles published annually (from the Family Safe Media website).

Similarly, Diamond et al (2010) examined how crime rates changed in the Czech Republic with the collapse of communism which had strictly regulated pornography:

‘As found in all other countries in which the phenomenon has been studied, rape and other sex crime did not increase’.

Perhaps not surprisingly, similar conclusions were reached by Ferguson and Kilburn (2010) on the growth of violent video games which mushroomed in the mid to late 1990s just as violent crime began to decline.

Dahl and Della Vigna (2007) exploited the variation in violence found in blockbuster movies between 1995 and 2004 to argue that violent crime in the USA was reduced by between 1.1% and 1.3% for every one million increase in audience for violent movies:

‘Overall, our estimates suggest that in the short-run violent movies deter almost 1,000 assaults on an average weekend’ (page 677).

Comment: There are considerable problems inherent in mapping real world crime where definitions shift and levels of reporting are very uneven. In the UK the most reliable source is the annual British Crime Survey (BCS). For the year 2011 to date, the self-reported incidence of rape including attempted rape in the
previous 12 months’ is currently 0.5% (i.e. 5 per 1,000 women). It has hovered between 0.4% and 0.5% over the last six years during which comparable data is available. The equivalent figure for male victims has fluctuated between zero and 0.1%. The broader category of any sexual assault, including attempts, fell from 3.3% in 2005/6 to 2.5% in 2011. Finally, the most recent figures on how many of these offences were reported to the police put the figure at only 11% (in 2009/10). This shows that reported crime statistics seriously underestimate the incidence of crime compared with victimization rates. However, even these have an uncertain relationship with the true incidence of sexual assault and vary tremendously according to definitions and methods of study (e.g. Kolivas and Gross, 2007).

The above should urge some caution in drawing conclusions about real world crimes. Nevertheless, it is important to decipher patterns in them and to examine links with potential drivers such as the mass media. It is disappointing that in the UK this remains unexplored territory and there are no studies such as reviewed at the beginning of this section.

**Copycat crime**

Claims of media inspired deviant behaviour are common. Perhaps the most recent case concerns Arid Uka who was charged with two accounts of murder and three attempted murders following an attack on US servicemen in Germany. A devout Muslim, he had seen a video on Facebook purporting to be of US servicemen raping a Muslim girl in Iraq. ‘I thought what I saw in that video, these people would do in Afghanistan’, Mr Uka said. Ironically, it seems that the rape scene in the video was from Brian De Palma’s 2007 anti-war film *Redacted*. (BBC News Europe, 31 August 2011). Perhaps this should be categorised as a case of mistaken identity.

*Prince (2003)* claimed that between 1978 and 1982, *The Deer Hunter* (1978) inspired thirty-one copycat incidents in which hand-guns were used in rituals of Russian roulette. *Natural Born Killers* has been linked to over a dozen copycat crimes. *Helfgott (2008)* argued that:

> ‘An increasing number of documented cases show that actual serial murderers and school shooters have mimicked or altered their behavior based on media stories of actual or fictional killers ’ (page 385).

Unfortunately, even when the subject of litigation (notably in the USA), such cases seem poorly documented. *Simon (2007)* emphasised the difficulty of finding data relevant to copycat crime. He unearthed figures in an appendix of a
government publication to reveal that, by the end of the fourth week after the Columbine High School massacre, 350 students had been arrested nationwide on charges related to threats of various kinds against schools/students. Simon argued that, although there was no significant increase in actual shootings, this may have been because these were prevented by more people reporting concerns (hence the arrests).

There is surprisingly little contemporary research on this phenomenon. Surette (2011) describes a study he carried out in 2002 with 68 youth offenders. He asked: ‘Can you recall ever having tried to commit the same crime that you had seen, read or heard about in the media?’ Just over one quarter (27%) said ‘Yes’. He concluded:

> ‘As a full group, these juveniles do not see media as a significant influence. However a small percentage of the juveniles, who also consistently identify themselves as engaging in copycat behaviours, sees the media as significant and more influential in their own and other juveniles’ criminality’ (page 63).

Elsewhere there are snippets suggesting a need for more attention – for example, Guy et al (2003) mention that 40% of a sample of violent schizophrenic patients in Broadmoor had modelled themselves on violent screen characters and the same number (40%) reported that violent images from the screen had been influential in their index offence. Half (50%) of these patients with schizophrenia and a history of violence experienced pleasure watching screen violence compared with only 10% of the orthopaedic control group.

Finally, while many pornography consumers say that the material has inspired them to try activities (e.g. Svedin et al 2010), there is little information on the kinds of content and activities in question.

**Comment:** Most claims of copycat crime are probably unfounded but they deserve to be more thoroughly investigated and documented rather than left to the proselytising fancies of journalism. The term ‘Copycat’ trivialises and oversimplifies the issue of social contagion. Recent use of the term to explain away riots and terrorism is unhelpful for profoundly complex problems (e.g. Nacos, 2009).

**Types of material and effects**
A particular mission for this review was to identify the types of content which have emerged as potentially harmful in the effects research. Electronic copies of the literature were used to search terms such as ‘graphic’ and ‘extreme’ and ‘sexual violence’. It was rare for references to sexually violent material to
appear outside the context of the pornographic (i.e. material designed to arouse sexually). In addition, until a decade ago, ‘slasher’ movies were quite popular with researchers who might include them in the category of sexual violence. Exceptionally, box office films have been used which contained an occasional scene of sexual violence (e.g. *The Accused, Deliverance, Straw Dogs*). Unfortunately, none of these studies adopt a methodology which allows any meaningful comparison between the different types of material.

It soon became clear that an extremely wide range of content has been identified as ‘harmful’ by those claiming effects. By and large, a convenient consensus seems to have emerged that erotica is probably fairly harmless but that sexually violent and degrading portrayals of women is not. Although the evidence has never been very clearly laid out, few have wished to challenge the message. However, the recent research by Vega and Malamuth (2007) effectively does so since it undermines the previous advice that the most problematical material is that which is sexually violent. This study asked only about top shelf magazines and yet achieved the highest correlations ever with sexual aggression (+0.477); sexual dominance (+0.473) and delinquency (+0.345). These are astonishingly high and especially puzzling since, in their introduction, Vega and Malamuth wrote (page 104) that the design ‘probably “stacks the cards” against a significant effect’. In the results the authors comment only on the measure of sexual aggression and pornography (page 109):

‘The magnitude of this correlation is relatively high but similar to that obtained in some other studies and within the range that may be expected based on the national representative sample used by Malamuth et al (2000).’

The detail does not support this. It is true that *Malamuth et al (2000)* state in their concluding section (page 80):

‘In the present research, in contrast to earlier studies of this type, we used a representative sample of the population.’

However their sample was of college populations (mean age = 21). More than this (page 62), 41% of colleges sampled were ‘replacements’; an undisclosed number of classes ‘could not be used’; 42% of questionnaires were rejected (mainly due to missing data on the dependent measures) while an undisclosed number had missing data on independent variables where ‘they were replaced by the mean score for the entire sample’. More to the point, the Malamuth et al study acknowledges (page 81):
‘...we obtained a relatively low correlation between pornography and sexual aggression, r = .12 (n = 2644).’

The authors then provide a further bizarre statistic (page 81):

‘In contrast, if we included participants only from the two extremes of risk (groups 1 and 9) the same analysis yielded a much higher correlation of .30 (n = 445).’

This can have little meaning. It is not just that these groups contribute only 17% to Malamuth et al’s sample, it is that extreme groups always regress to the mean when retested – they are not stable. In any case, as the authors appear to acknowledge, the higher correlation appears to be due entirely to the 27 men in the high risk group (group 9) who were also ‘very frequent users of pornography’ since (page 78): ‘none of the other groups significantly differed from each other’.

Quite apart from this, Malamuth et al (2000) review other research which muddies the picture even further. They advise:

‘...in a series of three priming studies, Mussweiler and Förster (in press) found that the mere presence of sexual stimuli may increase men’s tendency to behave aggressively...in the third study this facilitation was specific to aggressive behavior directed against a female target’ (page 82).

These German studies involved words being flashed on a screen ‘subliminally’ for 86 milliseconds and then masked to obliterate them. The sex words included Bett (bed); Haut (skin); feucht (wet) and steif (stiff). The aggression words included Angriff (attack); Gewalt (violence) and Mord (murder). Such research may be of theoretical interest to cognitive psychologists. However, in the present context and recommended by Malamuth et al, it sounds like the thirteenth chime of a clock – casting doubt not only on itself but on all that has gone before.

This is not to suggest that the priming effect is not a genuine phenomenon (see Roskos-Ewoldsen et al 2007 for a meta-analysis review. However it calls into question concerns about film when similar effects can be achieved with a word. Similarly, Allen et al (2007) reported a comprehensive analysis of 23 studies which had examined a link between exposure to music and anti-social beliefs and actions. Here the correlation was +0.228 which is larger than most ‘effects’ reported for video violence or pornography. Regrettably and perhaps all too
typically, Roskos-Ewoldsen were unable to break down the analysis by type of music since this was so rarely detailed in the research.

Overall, the effects literature paints a very confusing and often contradictory picture of the kinds of material which are thought to be potentially harmful. For example, two articles picked up by the global search terms (which are underlined in the text below), advised:

‘More importantly, there is evidence that even cartoonish violence can have the same types of effects as more realistic or graphic violence’ (Gentile, Saleem and Anderson, 2007, page 18).

and:

‘In the groups most commonly studied in the psychological research, media violence effects may be stronger for milder forms of aggression than for extreme forms of violence’ (Dill et al, 2011, page 118).

It would be ambitious to attempt some kind of taxonomy of sexual violence, styles of representation and film types, but a much clearer picture of the prevalence of different kinds of material seems essential. It is an empirical question how audiences would classify very graphic or sadistic or sexual violence but it is likely that the seriousness of treatment, narrative function and broad genre styles (e.g. Mondo, Gonzo or Glossy) are the kind of dimensions which might emerge.

**Types of viewer**

Although most of the effects research has been carried out by psychologists, it is surprising that individual differences tend to have been quite neglected. Oliver (2002), in a focussed review of this issue, remarked that: ‘The topic of individual differences is essentially a messy one’ (page 507). Undoubtedly, dispositions, traits and attitudes moderate media experiences. Despite this, experiments on pornography, for example, all seem to assume that the audience is homogenous - that viewers will be aroused by the material (rather than disgusted and made angry), that all viewers are heterosexual and so on.

There has been a long tradition of research on what kinds of people are attracted to and enjoy different kinds of media content. Indeed, recently, a meta-analysis has been published of selective exposure to and enjoyment of media violence (Weaver, 2011). In all, 65 independent studies made up the data base. Gender was a predictor of exposure and enjoyment. Males preferred to watch violence more than females (+0.28) and enjoyed violence more (+0.22). Aggressive individuals showed more selective exposure to violent content (+0.16) and enjoyed violence more (+0.18) than their less aggressive counterparts.
Curiously, the ‘effect’ of violence was to increase selective exposure but for viewers to enjoy the material less. Weaver suggests that this finding echoes previous research by Weaver and Wilson (2009) who edited films to conclude that viewers enjoyed graphic and sanitised violence equally but less so than versions where the violence had been edited out.

An earlier meta-analysis by Hoffner and Levine (2005) covered similar but wider ground including fright and violence in the media. They found that viewers who were male; high on sensation seeking; high on trait aggressiveness and low in empathy reported more enjoyment of both frightening and violent movies. Empathic concern showed a significant negative association only with very graphic violence (which was unfortunately not defined).

Along the same lines, Banarjee et al (2009) found that watching verbally aggressive TV fare – especially ‘animated sitcoms and political satire’ (p10) - was predicted by sensation seeking and aggressive personality. Moreover, watching such TV was associated with risky driving, fighting, delinquency, alcohol drinking and drug use.

No similar analysis has been conducted for sexual violence. Perhaps the reason is that differences between individuals in their pornographic experiences are more often taken as evidence of ‘effects’ rather than drivers of that experience. Svedin et al (2010) noted that high consumption of pornography might be a symptom of compulsive sexuality (‘sexual lust almost everyday’ was claimed by 42% in this group versus only 12% of low frequency users). Additionally, a large survey by Štuhlhofer et al (2007) reported that neither age of first exposure to pornography nor frequency of use at age 14 predicted sexual compulsivity at 18 years old. This is more direct evidence that pornography is a symptom rather than a cause of sexual compulsivity.

Among the correlates of aggression is that of psychopathy even in subclinical populations (Williams et al 2009). Those scoring high on this personality dimension (psychopathy is a continuum) seem more likely to have a penchant for a wide range of anti-social media (e.g. Shim, Lee and Paul, 2007). It is unlikely that psychopathy could be changed by media experiences, but how psychopathy might mediate viewing experiences is unknown. Simple questions such as: ‘What did you think of the film?’ would help illuminate this but have not been asked.

**Research limitations**
The research is limited both in aims and methods. There is an absence of any applied imperative so that studies tend to accumulate theoretical rather than
actual evidence of harm. Secondly, the large proportion of research has been generated within a particular North American empirical tradition based on undergraduates who participate to earn course credits for their introductory psychology class. In some fields of inquiry, there can be little objection to such participation. However, where students are aware of the researchers' hypotheses, then there is the likelihood that they may merely behave as good subjects to please the experimenter (Rosenthal, 2003).

Many of the early studies on the effects of media sex and violence were carried out by Berkowitz and Donnerstein on undergraduates in the Psychology department at the University of Wisconsin. During this time, Berkowitz wrote popular articles about his experiments (such as in Psychology Today in 1970) while both he and Donnerstein became prominent figures in senate hearings and in campaigns against media sex and violence. On this basis, it is difficult to believe that the participants in these studies knew nothing about the context of the experiments and were not influenced by it.

For the above reason and because their use has become quite sporadic in the last decade, laboratory experiments have received little attention here (although such studies contribute to the literature reviews and meta-analyses discussed here). The majority of the evidence is derived from correlational studies, but even here the persistent use of undergraduates has dominated the picture. Thus, concerns remain that the data is contaminated by atypical responses from participants who are far from being ‘naïve subjects’.

Quite apart from this issue, participants who have strong views about issues such as violent pornography can only express their opinions through the constraints of the research method. For example, measures taken such as Rape Myth Acceptance then become the only way of communicating an opinion and so generate their own source of artefact.

**Known unknowns**

Some of the major gaps in knowledge are set out below:

**Media inspired crime.** Regulatory bodies should have the moral obligation to carry out an objective investigation of cases where deviant behaviour is linked to the material for which they have responsibility - video games, television and films. Serious deviancy where offenders are incarcerated might require more intensive effort such as contacting forensic professionals involved, carrying out police interviews and perhaps even inviting the offender to participate. Liaison
with regulatory bodies in other countries would assist in establishing the prevalence of such claims and in clarifying the issues surrounding such cases.

**Culture clashes and differences.** Little is known about how diaspora groups may react to images of sexual or sadistic violence. Theoretically, we might expect media images to be more impactful for those with less experience of a country's mores and conventions. Equally, films from other cultures may be evaluated differently by members of those cultures when they are located elsewhere as a diaspora. For example, how is 'eve teasing' (sexual harassment in Hindi films) received in different cultural settings?

**Criminogenic and deviant thoughts.** Much of the effects literature focuses on how media representations might feed into audiences. Instead some effort could be put into the aetiology of deviant thoughts and values, to ascertain the role of the media. For example, it seems appropriate to avoid images of auto-erotic asphyxia in film in case of fatal imitation. However it would be interesting to know how this develops as a paraphilia. Anecdotal accounts have suggested self-discovery, watching Hitchcock's *Frenzy* and reading of the death of Michael Hutchence. Each or none might contribute.

**Nonce thoughts.** The idea of 'nonce' beliefs is that these are ones that a viewer embraces during the media experience but then returns to the fixed beliefs with which s/he began. Concerns about nonce beliefs becoming fixed beliefs are at the heart of many effects studies. However there does not seem to be any relevant research to show whether 'nonce' beliefs are a part of the normal viewing experience and if so how it impacts on enjoyment and judgments about the acceptability of content, still less how these might persist.

**Drawing the line.** Despite some useful research commissioned by the BBFC, a systematic understanding of where people draw the line has yet to be attempted. What factors about a film or an individual determine judgements about acceptability? Is it possible to determine 'benchmark' cases which could be used to help predict audience responses to new material received for classification?


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