



STATEMENT REGARDING THE EFFECTS OF VIOLENT VIDEO GAMES

In considering the important policy decision of whether Australia should introduce an R18+ classification for computer games, it is my view that relevant scientific findings should be a part of the above discussion and a factor that is considered by the Attorneys' General when making their decision.

For me, the key scientific findings are those related to (a) whether an R18+ rating will be effective in restricting access to material with high levels of violence from children, (b) whether exposure to high levels of media violence has a detrimental effect on children and adults, and (c) whether age-based classification systems are the most helpful system for consumers of media.

Will an R18+ rating be effective in restricting access to material with high levels of violence?

In the US, the game Grand Theft Auto is rated M (17+) due to high levels of violence, and is thus, in theory, unavailable to those under the age of 17. In the most recent large scale study of media habits in US children, Roberts et al (2010) found that 56% of US children aged 8 to 18 played Grand Theft Auto. Clearly, the M (17+) classification has not restricted access to the game for many children aged under 17. Although the US is not Australia, the degree to which this game is played at ages well below 17 raises the serious concern that an R18+ classification in Australia may not be effective in keeping video games with high levels of violence from being played by children and youth under the age of 18.

Does exposure to high levels of media violence have a detrimental effect on children and adults?

There is a popular perception that amongst scientists who do research in this area, there is no agreement as to whether exposure to violent media is causally linked with aggressive behaviour, and that 'the jury is still out' on this matter. Although there are a small number of scientists who do not accept this link, this group is a tiny minority and there is wide consensus amongst researchers in this area that violent media exposure is causally linked to increased aggression in both the short and long term.

In terms of violent video game effects, this also applies. There are a small number of scientists who do not accept the link between violent video game playing and aggression, with the most well known being Chris Ferguson. Dr Ferguson cites three of his meta-analytic studies of 14, 17 and 24 video game papers. The largest meta-analysis (Ferguson, 2007) analysed 25 studies involving 4205 participants. After making somewhat controversial data conversions, Dr Ferguson found that the effect of video game playing on aggressive behaviour dropped to non-significance. These studies are the evidence most cited as demonstrating that playing violent video games has not been shown to lead to increased aggression.

The vast majority of scientists who do research in this area disagree, and believe that the current evidence is now sufficiently strong to confidently claim that a causal link exists between playing violent video games and aggressive behaviour (see Huesmann, 2010). In the best analysis of the evidence to date, published in the prestigious *Psychological Bulletin*, Anderson et al (2010) analysed 136 papers on violent video game effects that detailed 381 studies involving over 130,000 participants. Their findings were unambiguous: playing violent video games increased aggressive thoughts, feelings and behaviours, and decreased empathy and pro-social behaviour.



The consensus of scientists around this issue is demonstrated in an *amicus curiae* brief submitted in relation to the US Supreme Court case brought by the State of California against the Video Software Dealers Association and Entertainment Software Association regarding a proposed law to prohibit the sale of violent video games to minors without parental consent.

For the brief, 14 respected researchers in the field, including a number of the world's leading researchers, collaborated to produce a statement that summarises the scientific evidence regarding the effects of exposure to violent video games. This statement was also endorsed by a further 43 researchers in the field (a list of all authors and endorsers is appendicised). As one of the 14 authors, it also summarises my own position, and is thus reproduced below.

“Both the American Psychological Association (APA, 2005) and the American Academy of Pediatrics (AAP, 2009) have issued formal statements stating that scientific research on violent video games clearly shows that such games are causally related to later aggressive behavior in children and adolescents. Extensive research has been conducted over many years using all three major types of research designs (experimental, cross-sectional, and longitudinal). Numerous original empirical research studies have been conducted on children and adolescents. Overall, the research data conclude that exposure to violent video games causes an increase in the likelihood of aggressive behavior. The effects are both immediate and long term. Violent video games have measurable and statistically significant effects on both males and females. Theoretically important effects of violent video games have been confirmed by many empirical studies. The effects have been replicated by researchers in different settings and in numerous countries. The psychological processes underlying such effects are well understood and include: imitation, observational learning, priming of cognitive, emotional and behavioral scripts, physiological arousal, and emotional desensitization. These are general processes that underlie all types of social behavior, not just aggression and violence; they have been confirmed by countless studies outside of the media violence domain. In addition to causing an increase in the likelihood of aggressive behavior, violent video games have also been found to increase aggressive thinking, aggressive feelings, physiological desensitization to violence, and to decrease pro-social behavior.”

Are purely age-based classification systems the most helpful system for media consumers?

In his analysis of classification systems, Gentile (in press) notes 7 distinct problems with purely age-based classification systems:

1. Lack of consistency in ratings;
2. Ratings creep (the tendency for the same types of material to be given lower classifications over time);
3. The lack of content information;
4. Incongruence with the scientific evidence regarding harmful effects, especially regarding the effect of violent media;
5. Lack of agreement between classifications and parent ratings of the same material;
6. Lack of clarity around the meaning of the classifications and lack of publicity for the systems;
7. The ‘Forbidden Fruit Problem’ whereby children and adolescents are particularly attracted to material with a rating beyond their age.

Introducing an R18+ category for video games will be subject to the same problems, with ratings creep, the forbidden fruit phenomenon, lack of content information and being out of step with scientific findings the most salient.



In this brief paper I do not have the space to labour these points, but note that anecdotally many parents, when faced with the content of games their children play, are very surprised at the level of violence in some. Gentile notes that parents want comprehensive information about their children's media so that they can make an informed decision about whether their child should use that media. Children, too, would benefit from clear guidance about media content. Current ratings systems do not provide this. Cantor (2006) has suggested, and I agree, 'that the descriptors should be much more explicit and illustrative, such as "first-person shooter," "blood-spurting," "exposed brain matter," "sever heads with sword," "shoot and kill police officers," and "sex with prostitute," rather than broad euphemistic terms like "intense violence" '(Gentile, in press). In my view, rather than consider a new video game category, an overhaul of the classification system should be considered, one in which detailed content information is considered as part of any classification system.

Overall, the research findings suggest that (1) children and youth are likely to obtain and use R18+ video games should such games be made available in Australia, (2) that violent video games have clear effects on children, adolescents and adults, including increased aggression and decreased empathy and pro-social behaviour, and (3) that purely age-based classification systems have significant limitations that reduce their effectiveness.

Thank you for taking this evidence into account as you discuss whether the introduction of a new R18+ classification for video games would benefit Australia.

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References

Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B.J., Sakamoto, A., Rothstein, H.R., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries. *Psychological Bulletin, 136*, 151-173.

Cantor, J.R. (2006, October). *Desired features of media ratings*. Paper presented at the National Summit on Video Games, Youth, and Public Policy, Minneapolis, MN.

Ferguson, C. J. (2007a). Evidence for publication bias in video game violence effects literature: A meta-analytic review. *Aggression and Violent Behavior, 12*, 470-482.

Gentile, D. A. (in press). The ratings systems for media products. In S. Calvert and B. Wilson [Eds.], *Handbook of children and the media*. Thousand Oaks CA: Sage.

Huesmann, L. R. (2010). Nailing the coffin shut on doubts that violent video games stimulate aggression: Comment on Anderson et al. (2010). *Psychological Bulletin, 136*, 179-181.

Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). *Generation M2: Media in the lives of 8-18 year olds*. Merlo Park CA: Henry J Kaiser Foundation.



Appendix A

Statement on Video Game Violence

“Both the American Psychological Association (APA, 2005) and the American Academy of Pediatrics (AAP, 2009) have issued formal statements stating that scientific research on violent video games clearly shows that such games are causally related to later aggressive behavior in children and adolescents. Extensive research has been conducted over many years using all three major types of research designs (experimental, cross-sectional, and longitudinal). Numerous original empirical research studies have been conducted on children and adolescents. Overall, the research data conclude that exposure to violent video games causes an increase in the likelihood of aggressive behavior. The effects are both immediate and long term. Violent video games have measurable and statistically significant effects on both males and females. Theoretically important effects of violent video games have been confirmed by many empirical studies. The effects have been replicated by researchers in different settings and in numerous countries. The psychological processes underlying such effects are well understood and include: imitation, observational learning, priming of cognitive, emotional and behavioral scripts, physiological arousal, and emotional desensitization. These are general processes that underlie all types of social behavior, not just aggression and violence; they have been confirmed by countless studies outside of the media violence domain. In addition to causing an increase in the likelihood of aggressive behavior, violent video games have also been found to increase aggressive thinking, aggressive feelings, physiological desensitization to violence, and to decrease pro-social behavior.”

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