VIRTUAL VIOLENCE

Researchers disagree about whether violent video games increase aggression.

BY BETH AZAR

On Nov. 2, the U.S. Supreme Court heard arguments for and against a 2005 California law that prohibits the sale of M-rated — "mature" — video games to minors.

Advocates of the law say it protects children from overly violent games, and they support their argument with psychological research that shows a link between playing violent video games and aggression.

The law's opponents — led by the Entertainment Merchants Association and Entertainment Software Association — claim there's no scientific link between playing violent games and any real-world problems.

The debate mirrors one in the scientific community over violent video games. A large group of research psychologists believe that the evidence is clear that people who play violent video games have more aggressive thoughts, beliefs and behaviors than people who don't. They base their conclusions on decades of research in the laboratory and the real world, capped off in March with a meta-analysis in Psychological Bulletin (Vol. 136, No. 2).

The answer to questions of whether violent video games increase aggressive thoughts, angry feelings and angry behaviors "are pretty clearly 'yes' for females and males, children and adults, people who live in the West and the East," says study co-author Ohio State University's Brad Bushman, PhD.

Opponents of this view find fault with the research and point to other studies and meta-analyses that they say show no link between violent media and aggression. At the least, they say, more research is needed before anyone starts legislating based on the science. At the worst, they argue, people are skewing the data to support a personal or political agenda.

"I'm worried about the rush to legislate because, as I see it, we have way more questions than we have answers," says public health researcher Cheryl Olson, ScD, who co-directs the center for mental health and media at Massachusetts General Hospital. "We need many more studies with clear definitions of aggression and validated measures."

APA weighed in on the debate in 2005 when it passed a resolution (see www.apa.org/about/governance/council/policy/interactive-media.pdf), concluding that the research strongly suggests a link between violent media and aggressive behavior.

"Since then, the literature has evolved and, if anything,
adds more support to that position," says APA Executive Director for Science Steven J. Breckler, PhD. "Nevertheless, this is an area of ongoing research, and other perspectives are emerging."

Both perspectives have signed on to different science-based amicus briefs filed in the Supreme Court case. APA was invited to submit a brief, but after a review of the literature, the association concluded it was premature to advise the court on research-based links between violent video games and problematic behavior in the context of a First Amendment challenge. Breckler explained that although most of the research in this area supports a connection between violent games and aggression, there is also some credible research to the contrary, and APA concluded that there was not a basis to weigh in with the Supreme Court given the nature of the relevant research and the legal issues at question.

In the end, Breckler says, only more research can settle the matter.

Methodological problems?

While Iowa State University psychologist Craig Anderson, PhD, isn't taking a position on whether laws to restrict access to violent video games are appropriate, he does believe that the findings from the 2010 Psychological Bulletin meta-analysis are perfectly clear. In it, he and his colleagues analyzed data from 136 papers, representing 130,296 participants and studies from several countries. The studies include experimental laboratory work, cross-sectional surveys and longitudinal studies.

Overall, says Anderson, they found a consistent and significant correlation between playing violent video games and many measures of aggression commonly used in psychology, including self, teacher and parent reports of aggressive behavior. They also used experimental measures that include participants choosing to administer loud noises and electric shocks to another person.

These correlations — between 0.17 and 0.2 — are as strong as any seen in social psychology, says Bushman, a co-author of the meta-analysis and an expert in meta-analytic techniques. In fact, he says, they're as strong as, or stronger, than other risk factors for youth violence suggested in the 2001 Surgeon General's Report on youth violence. The correlation is on par with such risk factors as poor parent-child relationships, being male and having a prior history of violence — and the correlation is even larger than those for such risk factors as having antisocial parents, having a low IQ, poverty and substance use, Bushman says.

But Texas A&M International University psychologist Chris Ferguson, PhD, rejects those claims. His own meta-analyses — the most recent a 2009 paper published in the Journal of Pediatrics (Vol. 154, No. 5) — find no correlation between aggression and violent video games, he says. As for Bushman's and Anderson's much larger 2010 meta-analysis, Ferguson and others, such as American University criminologist Joanne Savage, PhD, argue that most of the studies analyzed had methodological problems.

"The research has been so mangled to this point, we really have to start again," says Ferguson, who wrote a highly critical commentary that accompanied the 2010 meta-analysis. He contends that newer studies that have fixed some of the methodological issues, using well-validated outcome measures and better designs, are "coming out consistently showing that there's no effect for video games."
Anderson, Bushman and others vehemently disagree and lay out their own criticisms of Ferguson’s methods in a response to his commentary published in the same issue. Their meta-analysis, they say, used state-of-the-art methodologies and examined all the studies that met their research criteria that were available up to the time of their analysis — a total of 136, compared with 25 in Ferguson’s largest.

“As a whole, the body of work in this area suggests that there is a genuine need for concern about high levels of exposure to violent video games, especially for kids prone to engaging in aggressive behavior,” says psychologist Brian Wilcox, PhD, director of the University of Nebraska-Lincoln's Center on Children, Families, and the Law, who has thoroughly read the literature. “The question will always be whether that’s enough to convince the court to restrict freedom of speech.”

What’s the real effect?
To do that, says Wilcox, there needs to be a better causal link between playing violent video games and socially relevant behaviors. A good start toward that is several new longitudinal studies that support the connection between violent video games and aggression. One, in Aggressive Behavior (Vol. 35, No. 1), found that among 145 German adolescents, self-reported violent video-game use predicted self-reported physical aggression 30 months later.

“On multiple continents, in multiple cultures, if you control for physical aggression at time one and ask if violent video-game playing predicts an increase in physical aggression at time two, the answer is yes,” says Iowa State University developmental psychologist Doug Gentile, PhD, who has conducted many studies examining the effect of video violence on children.

But are these effects significant enough to make a real-world difference in how people behave? Not necessarily, says Michigan State University communications associate professor John Sherry, PhD, who has done his own meta-analysis. In his study, published in Human Communication Research (Vol. 27, No. 3), he concluded that people who played violent video games were consistently slightly “more grumpy” than those who didn’t. And he believes that even that effect would probably disappear in the real world, per social learning theory. “The violent game player would need to be rewarded for the anti-social behaviors he imitates,” says Sherry. “That may happen in the case of a few bad parents, but it’s certainly not the norm.”

Other researchers also point out the fact that even though more people have spent more time playing violent games in recent years, violent crime rates have decreased.

“Looking at the data as a criminologist, I have to say that the evidence does not demonstrate a measurable effect of any type of violent media on violent crime,” says Savage. It’s also nonsense, she adds, to argue in favor of legislation restricting violent media to help decrease violent crime — as some politicians have done — by citing methodologically flawed studies that test the effects of media on minor aggression.

Gentile counters that violent crime statistics are an inappropriate level of analysis for thinking about the effect of violent video games. “The only way for violent games to affect serious criminal violence statistics is if they were the primary predictor of crime, which, of course, they’re not,” he says.

Rather, they’re one risk factor for aggression among many, and it takes several risk factors, combined with few protective factors, to move someone from mild aggression to serious physical violence. Gentile compares it to smoking: “Two-thirds of smokers don’t get lung cancer because they have enough protective factors. But if you open them up and look at their lungs, you’ll see that it was still influencing them all along.”

As a society, we’ve decided to control cigarette sales to minors because it’s a risk factor for cancer that we can easily control. The same goes for violent video games, says Gentile. Even if they are only one risk factor among many for aggression, because they’re one that we can easily control, why shouldn’t we?

In the end, it may be that, as with smokers, some children are more vulnerable to the effects of violent media. In a study published last spring in a special issue of Review of General Psychology (Vol. 14, No. 2) on video games, Villanova University psychologist Patrick Markey, PhD, found that children were more likely to become hostile after playing violent video games if they measured high on neuroticism, low on agreeableness and low on conscientiousness. But more studies like this need to be done before making firm conclusions, agree researchers on both sides of the debate.

With or without clarity on that particular issue, the Supreme Court will weigh in on the debate, and the question is, are the research findings strong enough to convince the justices that they should restrict the rights afforded under the First Amendment? Wilcox doesn’t think so, in large part because courts use different standards than behavioral researchers.

“There may well be a solid argument for an effect, but what the courts are interested in is how broad the effect is, how deep it is and whether it will result in socially meaningful levels of aggression,” he says. “I just don’t think the court is going to buy the evidence we have at this time to reach the strict scrutiny standard they’d need to uphold the California law.”