

# DO VIOLENT VIDEO GAMES HARM CHILDREN? COMPARING THE SCIENTIFIC AMICUS CURIAE “EXPERTS” IN BROWN V. ENTERTAINMENT MERCHANTS ASSOCIATION

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## INTRODUCTION

In *Brown v. Entertainment Merchants Ass’n*,<sup>1</sup> video game merchants present a First Amendment challenge to a California law regulating sales of certain violent video games to children less than eighteen years of age.<sup>2</sup> A primary issue presented to the Supreme Court is whether California’s interest in protecting children from serious psychological or neurological harm is sufficiently compelling to overcome First Amendment scrutiny. This Essay briefly summarizes the California law and the Ninth Circuit’s opinion,<sup>3</sup> which held that the law violates the First Amendment and questioned the strength of the scientific evidence used to support the claim of harm to minors. This Essay then compares amicus curiae scientific experts on both sides of the case and presents an original quantitative analysis of the experts’ *relevant* expertise in the psychological effects of violence and media effects based on the briefs’ authors’ and signatories’ published scholarship. This Essay concludes that if the Supreme Court relies on scientific evidence

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<sup>1</sup> 130 S. Ct. 2398 (2010) (link).

<sup>2</sup> The terms “children” and “minors” are used interchangeably herein and refer to persons less than eighteen years of age.

<sup>3</sup> Video Software Dealers Ass’n v. Schwarzenegger, 556 F.3d 950 (9th Cir. 2009), *cert. granted, sub nom. Brown v. Entm’t Merchs. Ass’n*, 130 S. Ct. 2398 (2010) (link).

and expert opinion to reach its decision, it should consider the source of the evidence in deciding what weight the amicus curiae briefs deserve.

## I. THE CHALLENGED CALIFORNIA LAW AND THE NINTH CIRCUIT'S OPINION

The California law at issue in *Brown* prohibits the sale or rental of a defined class of violent video games to minors based on the state's determination that violent video games can cause serious psychological problems in minors.<sup>4</sup> The law defines the relevant materials primarily by modeling the three-part obscenity test from *Miller v. California*,<sup>5</sup> which permits the regulation of certain sexually explicit materials.<sup>6</sup> The law's modified *Miller* definition applies to works that appeal to a "deviant or morbid" interest in violence as opposed to a "prurient" interest in sex. Although the law has been amended, as it relates to this case, the law defines a "violent video game" as:

(d)(1) [A] video game in which the range of options available to a player includes killing, maiming, dismembering, or sexually assaulting an image of a human being, if those acts are depicted in the game in a manner that does either of the following:

(A) Comes within all of the following descriptions:

(i) A reasonable person, considering the game as a whole, would find appeals [sic] to a deviant or morbid interest of minors.

(ii) It is patently offensive to prevailing standards in the community as to what is suitable for minors.

(iii) It causes the game, as a whole, to lack serious literary, artistic, political, or scientific value for minors.

(B) Enables the player to virtually inflict serious injury upon images of human beings or characters with substantially human characteristics in a manner which is especially heinous, cruel, or depraved in that

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<sup>4</sup> The original Assembly Bill 1179 had been largely amended during the legislative session and replaced by Assembly Bill 450, codified at CAL. CIV. CODE §§ 1746–1746.5 (2010) (link). *Video Software Dealers*, 556 F.3d at 953, 953 & n.3.

<sup>5</sup> 413 U.S. 15, 24 (1973) (link).

<sup>6</sup> The *Miller* standard limits permissible regulations to "works which . . . appeal to the prurient interest in sex, which portray sexual conduct in a patently offensive way, and which, taken as a whole, do not have serious literary, artistic, political, or scientific value." *Id.*

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it involves torture or serious physical abuse to the victim.<sup>7</sup>

California argued that the court should assess the law's constitutionality under the "variable obscenity" standard from *Ginsberg v. New York*, whereby a state can regulate minors' exposure to sexually explicit material even if it would be unconstitutional as applied to adults.<sup>8</sup> The Ninth Circuit rejected the *Ginsberg* variable standard and refused to recognize a violence-based notion of obscenity.<sup>9</sup> According to the court, violence—no matter how morbid or graphic—is fully protected speech that cannot be regulated unless strict scrutiny is met.<sup>10</sup> It therefore invalidated the law because California did not provide a sufficiently compelling interest to overcome the strict scrutiny standard.<sup>11</sup>

California asserts two main arguments on appeal. First, California argues that *Ginsberg* should be extended to apply to sales regulations of extremely violent video games.<sup>12</sup> *Ginsberg* reasoned that "the State has an interest 'to protect the welfare of children' and to see that they are 'safeguarded from abuses' which might prevent their 'growth into free and independent well-developed men and citizens.'"<sup>13</sup> The Court specifically addressed the conflicting evidence concerning the harmful effects of sexually explicit materials on minors and found that state legislatures need not prove by scientific fact the deleterious effects of materials believed to harm minors to warrant regulating the sales of such materials to minors.<sup>14</sup> Rather, the Court conferred discretion upon the states to regulate such materials to safeguard minors from developmental harm.<sup>15</sup>

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<sup>7</sup> CAL. CIV. CODE § 1746(d)(1). The terms "cruel," "depraved," "heinous," "serious physical abuse," and "torture" are also defined in the statute. CAL. CIV. CODE § 1746(d)(2).

<sup>8</sup> See *Ginsberg v. New York*, 390 U.S. 629, 643 (1968) (holding that the state could prohibit the sale of sexually explicit material deemed "obscene" for minors, even if the material was not considered obscene for adults) (link).

<sup>9</sup> *Video Software Dealers*, 556 F.3d at 961, 967.

<sup>10</sup> *Id.* at 960–61. The Second, Sixth, Seventh, and Eighth Circuits have all rejected the argument that violent materials can be "obscene" speech, and therefore unprotected, because "obscenity" necessarily denotes explicit sexual or excretory functions. *Id.* at 959–60 (listing the circuit court decisions); see also Kevin W. Saunders, *Shielding Children from Violent Video Games Through Ratings Offender Lists*, 41 IND. L. REV. 55, 56–67 (2008) (documenting the circuit court decisions on this issue) (link).

<sup>11</sup> *Video Software Dealers*, 556 F.3d at 960–61, 964 (rejecting the "State's focus . . . on the actual harm to the brain of the child playing the video game" and concluding that "the evidence presented . . . does not support the Legislature's purported interest in preventing psychological or neurological harm"). The law also imposes a labeling requirement that the Ninth Circuit determined was "compelled speech" in violation of the First Amendment, see *id.* at 965–67, but the Supreme Court did not grant certiorari on that issue, *Brown v. Entm't Merchs. Ass'n*, 130 S. Ct. 2398 (2010).

<sup>12</sup> Appellant's Opening Brief at 1, *Video Software Dealers*, 556 F.3d 950 (No. 07-16620), 2008 WL 412514, at \*3–4.

<sup>13</sup> *Ginsberg*, 390 U.S. at 640–41 (quoting *Prince v. Massachusetts*, 321 U.S. 158, 165 (1944)).

<sup>14</sup> *Id.* at 641–43.

<sup>15</sup> *Id.*

Second, and critical to this Essay, California argues that it has a compelling interest in protecting minors from the harms of violent video games. California has thus presented scientific evidence in support of its claim. The legislative record was “flush with peer-reviewed articles, studies, reports, and correspondence from leading social scientists and medical associations analyzing the impact of media violence, and specifically violent video games, on minors and young adults.”<sup>16</sup> The violent video game merchants responded with legal arguments concerning the level of scientific proof necessary to establish a compelling interest and regulate speech, arguing that California failed to meet its burden of proving by “substantial evidence” that violent video games *cause* harm to children.<sup>17</sup>

The Ninth Circuit reviewed the scientific data, rejected California’s legislative determination that children’s use of violent video games can cause developmental harm, and struck down the law as violating the children’s right to receive the speech. The court thus found that the California law failed to meet strict scrutiny.<sup>18</sup> Despite acknowledging that the Supreme Court has recognized a “compelling interest in protecting the physical and psychological well-being of minors,”<sup>19</sup> the Ninth Circuit found that California did not demonstrate a compelling interest in this case because the empirical evidence supporting its position was insufficient to establish cause and effect between children’s use of violent video games and adverse health consequences.<sup>20</sup>

Specifically, the Ninth Circuit found that where the government seeks to restrict speech, it “must demonstrate that the recited harms are real, not merely conjectural, . . . that the regulation will in fact alleviate these harms in a direct and material way,”<sup>21</sup> and that, although the court “must accord deference to the predictive judgments of the legislature, [the court’s] ‘obligation is to assure that, in formulating its judgments, [the legislature] has drawn *reasonable inferences* based on *substantial evidence*.’”<sup>22</sup> The court held that California did not prove an *actual* harm because it failed to pro-

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<sup>16</sup> Appellant’s Opening Brief, *supra* note 12, at 28.

<sup>17</sup> Brief of Plaintiffs-Appellees at 40–41, *Video Software Dealers*, 556 F.3d 950 (No. 07-16620), 2008 WL 656626, at \*15.

<sup>18</sup> *Video Software Dealers*, 556 F.3d 950, 967 (9th Cir. 2009), *cert. granted, sub nom.* Brown v. Entm’t Merchs. Ass’n, 130 S. Ct. 2398 (2010).

<sup>19</sup> *Id.* at 962 (quoting *Sable Commc’ns of Cal., Inc. v. FCC*, 492 U.S. 115, 126 (1989)).

<sup>20</sup> *Id.* at 962–64. The California law set forth two compelling interests: (1) “preventing violent, aggressive, and antisocial behavior” and (2) “preventing psychological or neurological harm to minors who play violent video games.” *Id.* at 954. However, California dropped the first basis for establishing a compelling interest and relied on the latter. *Id.* at 961.

<sup>21</sup> *Id.* at 962 (quoting *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 664 (1994) (plurality opinion)).

<sup>22</sup> *Id.* (quoting *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 195 (1997) (emphasis added)).

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duce substantial evidence that violent video games *cause* psychological or neurological harm to minors.<sup>23</sup>

The Ninth Circuit's opinion was driven by an analysis of the strength of causation in the scientific research. On review, the Supreme Court may or may not center its opinion on an independent review of the scientific research. The Court could engage a "common sense" analysis as it recently did in *FCC v. Fox Television Stations, Inc.* and decline to require empirical proof that speech harms children before allowing its regulation.<sup>24</sup> Alternatively, it could defer to legislative fact-finding and executive policymaking similar to the deference it embraced in *Ginsberg*<sup>25</sup> and *Morse v. Frederick*.<sup>26</sup>

On the other hand, free speech is fiercely protected as part of the country's commitment to allowing the marketplace to determine the value of speech. Therefore, the Court could affirm the Ninth Circuit's decision based on the strength of the First Amendment to prevent speech regulation generally, regardless of the strength of the scientific evidence. Or, the Court could avoid the scientific controversy altogether and affirm on different grounds, such as overbreadth or vagueness.<sup>27</sup> Realistically, considering the profound First Amendment issues that turn on the risks that violent video games pose to children, and the fact that the lower courts focused on the scientific research in reaching their First Amendment conclusions, the Court will likely review the scientific research in making its constitutional ruling. Part II briefly summarizes the contradictory opinions of the experts and Part III compares their level of expertise in media violence quantitatively.

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<sup>23</sup> *Id.* at 962–64 (reviewing the empirical evidence linking violent video games with harm to minors). The court also held that the law was not narrowly tailored even if California could establish a compelling interest. *Id.* at 964–65.

<sup>24</sup> *FCC v. Fox Television Stations, Inc.*, 129 S. Ct. 1800, 1813 (2009) (upholding an FCC policy on fleeting expletives because "Congress has made the determination that indecent material is harmful to children" and "[i]f enforcement had to be supported by empirical data, the ban would effectively be a nullity") (link).

<sup>25</sup> 390 U.S. 629, 641 (1967).

<sup>26</sup> 551 U.S. 393, 407–08 (2007) (upholding punishment of student speech at a school-sponsored event, relying in part on legislative facts concerning minors' vulnerability to drug addiction) (link); see also Deana Pollard Sacks, *Children's Developmental Vulnerability and the Roberts Court's Child-Protective Jurisprudence: An Emerging Trend?* 40 STET. L. REV. 777 (2011) (on file with author). As in *Ginsberg*, the Court accepted the government's findings concerning the effects of speech on children. *Morse*, 551 U.S. 393.

<sup>27</sup> This seems unlikely, however, considering how closely the challenged law tracks the language of *Miller v. California*, 413 U.S. 15 (1973), and "prurient" seems harder to define for most people than "deviant" or "morbid." In addition, it makes little sense that the Court would grant review in such a controversial area of constitutional law in which the circuit courts are unanimous only to affirm the Ninth Circuit on other grounds.

## II. THE CONFLICTING “EXPERT” OPINIONS

Thirty-one amicus curiae briefs were filed in the Supreme Court in *Brown v. Entertainment Merchants Ass’n*, the vast majority by persons or entities financially interested in the outcome of the case.<sup>28</sup> Two scientific “experts” each filed briefs focusing on the scientific evidence that violent video games can harm children, one in support of California and one in support of the violent video game merchants.

Steven F. Gruel is the Counsel of Record on the amicus brief supporting California (Gruel Brief).<sup>29</sup> The Appendix of the Gruel Brief includes the following “Statement on Video Game Violence,” authored by thirteen of the most recognized media violence experts in the United States, Germany, and Japan,<sup>30</sup> and endorsed by 102 additional researchers:<sup>31</sup>

“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. . . . Overall, the research data conclude that exposure to violent video games causes an increase in the likelihood of aggressive behavior. . . . [V]iolent video games have also been found to increase aggressive thinking, aggressive feelings, physiological desensitization to violence, and to decrease pro-social behavior.”<sup>32</sup>

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<sup>28</sup> The Court should take notice of the financial incentives of many of the “friends of the court” who support the merchants: of the thirty-one amicus curiae briefs filed with the Court, twenty-seven were filed in support of the merchants, most of which were filed by persons and entities financially interested in the outcome of the case (e.g., the International Game Developers Association, the Microsoft Corporation, the Chamber of Commerce of the United States of America, Vindicia, Inc., ID Software, LLC, and Activision Blizzard, Inc.). For example, Activision Blizzard, Inc. has reaped approximately \$3 billion in sales for the Call of Duty game series. *Activision Says “Call of Duty” Series Tops \$3 Billion*, REUTERS, Nov. 27, 2009, <http://www.reuters.com/article/2009/11/27/us-activision-callofduty-idUSTRE5AQ37V20091127> (link). The company owns other popular video game series, such as the Tony Hawk, Spiderman, and James Bond series. *See, e.g., Activision Games*, ACTIVISION, [http://www.activision.com/index.html#games|en\\_US](http://www.activision.com/index.html#games|en_US) (last visited May 13, 2011) (link); *List of Activision Games*, WIKIPEDIA, [http://en.wikipedia.org/wiki/List\\_of\\_Activision\\_games](http://en.wikipedia.org/wiki/List_of_Activision_games) (last visited May 13, 2011) (link).

<sup>29</sup> *See* Brief of Amicus Curiae of California State Senator Leland Y. Yee, Ph.D., the California Chapter of the American Academy of Pediatrics, and the California Psychological Association in Support of Petitioners, *Brown v. Entm’t Merchs. Ass’n*, 130 S. Ct. 2398 (2010) (No. 08-1448), 2010 WL 2937557 [hereinafter Gruel Brief] (link).

<sup>30</sup> *See infra* Part.III.

<sup>31</sup> Gruel Brief, *supra* note 29, at 11, 2a–5a (endorsement list).

<sup>32</sup> *Id.* at 1a.

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The Gruel Brief references official statements from the American Academy of Pediatrics and the American Psychological Association that both express concern about serious health risks to children that are known to result from exposure to media violence, including “aggressive behavior, desensitization to violence, nightmares, and fear of being harmed.”<sup>33</sup> *Violent* video games present a particular concern because research demonstrates that playing such games leads to decreases in pro-social behavior.<sup>34</sup> The Gruel Brief also cites an APA resolution<sup>35</sup> asserting that playing violent video games increases violence towards women because such games “reward, glamorize and depict as humorous sexualized aggression against women.”<sup>36</sup>

Patricia A. Millett is the Counsel of Record on the amicus curiae that presents scientific evidence supporting the video game merchants (Millett Brief).<sup>37</sup> Eighty-two amici, comprised of academic scholars, medical scientists, and industry representatives, owners, or agents, joined the Millett Brief, claiming expertise in psychology, psychiatry, neuroscience, criminology, and the effects of violent video games.<sup>38</sup> These amici argue that California’s ban on the sale and rental of violent video games to minors is based on “profoundly flawed research.”<sup>39</sup> Specifically, they assert that “California does not offer any reliable evidence, let alone substantial evidence, that playing violent video games causes psychological or neurological harm to minors,”<sup>40</sup> and that the Gruel Brief “exaggerate[s] the statistical significance of the studies’ findings” that violent video games cause harm to children.<sup>41</sup> These arguments represent the views of authors claiming that “the ‘big fears’ bandied about in the press—that violent video games make children significantly more violent in the real world . . .—are not supported by the current research,” in part because “millions of children and adults

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<sup>33</sup> See *id.* at 11–12; see also Council on Commc’ns and Media, Am. Acad. of Pediatrics, *Policy Statement—Media Violence*, 124 PEDIATRICS 1495, 1495–98 (2009) (reaching similar conclusions) (link).

<sup>34</sup> See Gruel Brief, *supra* note 29, at 18.

<sup>35</sup> *Id.* at 12.

<sup>36</sup> Am. Psychological Ass’n, *Resolution on Violence in Video Games and Interactive Media* (Aug. 17, 2005), available at <http://www.apa.org/about/governance/council/policy/interactive-media.pdf> (specifying that the aggressive acts include “assault, rape and murder”) (link); see also Press Release, Am. Psychological Ass’n, *APA Calls for Reduction of Violence in Interactive Media Used by Children and Adolescents* (Aug. 17, 2005), <http://www.apa.org/news/press/releases/2005/08/video-violence.aspx> (providing that the American Psychological Association published its resolution on August 15, 2005) (link).

<sup>37</sup> See Brief of Social Scientists, Medical Scientists, and Media Effects Scholars as Amici Curiae in Support of Respondents, *Brown v. Entm’t Merchs. Ass’n*, 130 S. Ct. 2398 (2010) (No. 08-1448), 2010 WL 3697191 [hereinafter Millett Brief] (link).

<sup>38</sup> *Id.* at 1.

<sup>39</sup> *Id.*

<sup>40</sup> *Id.* at 2.

<sup>41</sup> *Id.* at 5.

play these games, yet the world has not been reduced to chaos and anarchy.”<sup>42</sup>

### III. COMPARING THE “EXPERTS”

If the Supreme Court bases its decision on the strength of the scientific evidence, then it should assess the credibility of the various experts who authored or endorsed the two scientific amicus curiae briefs. The purpose of this Essay is not to examine the validity of the statements contained in the two briefs,<sup>43</sup> but to examine the credentials of those who wrote or endorsed the two briefs.

#### A. Methodology and Results

The data for this Essay were obtained from PsycINFO database, which provides over three million references to psychological literature dating back to the nineteenth century. We searched the literature to 2011. For each expert author or signatory to the scientific briefs, we searched for general articles on violence or aggression using the search terms AU=(LAST, FIRST) AND AB=(*violen\** or *aggress\**), where AU=author and AB=abstract.<sup>44</sup> The abstracts (and sometimes entire articles) were examined to verify relevance to violence or aggression. Publications were divided into three categories: (1) peer-reviewed journal articles, (2) book chapters or essays, and (3) books. We also searched for original empirical research<sup>45</sup> on violence or aggression using the following syntax: AU=(LAST, FIRST) AND AB=(*violen\** OR *aggress\**) AND ME=(*empirical study*) AND PT=(*peer reviewed journal*) NOT ME=(*meta analysis* or *qualitative study*),<sup>46</sup> where ME=methodology and PT=publication type.

In addition to searching for general publications on violence or aggression, we also searched for specific original empirical articles, rather than

<sup>42</sup> LAWRENCE KUTNER & CHERYL K. OLSON, GRAND THEFT CHILDHOOD: THE SURPRISING TRUTH ABOUT VIOLENT VIDEO GAMES AND WHAT PARENTS CAN DO 18 (2008) (link).

<sup>43</sup> In the interest of full disclosure, note that we disagree with much of the information contained in the Millett Brief. For example, those authors dismiss all longitudinal studies on the effects of violent video games because the studies did not analyze participants on “many occasions” and over an “extended period” (although they do not define these terms). Millett Brief, *supra* note 37, at 4; *see, e.g.*, Craig A. Anderson et al., *Longitudinal Effects of Violent Video Games on Aggression in Japan and the United States*, 122 PEDIATRICS e1067 (2008) (link); *see also* Deana Pollard Sacks, California’s Interest in Schwarzenegger v. Entertainment Merchants Association, Part II.A., *available at* [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1739994](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1739994) (unpublished manuscript) (analyzing the scientific data that violent video games cause cognitive harm and aggression in children).

<sup>44</sup> “AU” stands for “author” and “AB” stands for “abstract.” The asterisk is a wildcard symbol that enables a user to retrieve various forms of a given word. For example, “*violen\**” will retrieve the words “*violent*,” “*violently*,” and “*violence*.”

<sup>45</sup> By “original empirical research,” we mean to exclude reviews of research conducted by others.

<sup>46</sup> “ME” stands for “methodology” and “PT” stands for “publication type.”

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reviews of research conducted by others, on media violence.<sup>47</sup> The following syntax was used: AU=(LAST, FIRST) AND AB=(*violen\** or *aggress\**) AND AB=(*video\** OR *media* OR *tv* OR *television* OR *console* OR *computer\** OR *game\** OR *film* OR *movie\**) AND ME=(*empirical study*) AND PT=(peer reviewed journal) NOT ME=(*meta analysis* OR *qualitative study*). The abstracts (and sometimes entire articles) were examined to determine whether research tested for a media violence *effect*—either measured or manipulated—on an outcome variable related to aggression or violence. A number of articles did not meet this criterion.<sup>48</sup>

Next, we determined whether the peer-reviewed journal was a top-tier journal. It is more difficult to publish articles in top-tier journals than in lower-tier journals. Although there is no universally agreed-upon criteria for what constitutes a “top-tier journal,” we used five-year impact factors from the ISI Web of Knowledge Journal Citation Report. Journals with a five-year impact factor of 2.5 or higher were defined as top-tier journals. Almost all top-tier psychology journals have impact factors of 2.5 or above. Thus, on average, each article published in a top-tier journal was cited by 2–3 other researchers. Two independent raters coded all studies retrieved from our literature searches. In the few cases in which disagreements arose about coding, these disagreements were resolved by discussion. The results of the various searches are depicted in Table 1.

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<sup>47</sup> Here, The following syntax was used: AU=(LAST, FIRST) AND AB=(*violen\** or *aggress\**) AND AB=(*video\** OR *media* OR *tv* OR *television* OR *console* OR *computer\** OR *game\** OR *film* OR *movie\**) AND ME=(*empirical study*) AND PT=(peer reviewed journal) NOT ME=(*meta analysis* OR *qualitative study*).

<sup>48</sup> For example, the initial search returned articles that reported the *content* of video games rather than effects of video games on players.

Table 1. *Comparison of publications for authors of the Gruel Brief and signatories to the Gruel Brief and signatories to the Millett Brief. Asterisks indicate that the Gruel Brief authors or Gruel Brief signatories differ significantly from the Millett Brief signatories at the .05 significance level (i.e.,  $p < .05$ ).*

	<i>Gruel Brief authors (N=13)</i>	<i>Gruel Brief signatories (N=115)</i>	<i>Millett Brief signatories (N=82)</i>
<b>AGGRESSION/VIOLENCE</b>			
Mean number of peer-reviewed journal articles	22.31* (SD=22.59)	10.53* (SD=18.14)	1.21 (SD=3.26)
Mean number of peer-reviewed journal articles based on original empirical research	13.54* (SD=13.54)	7.05* (SD=13.45)	0.48 (SD=1.67)
Mean number of book chapters or essays	6.77* (SD=8.97)	2.24* (SD=4.46)	0.37 (SD=1.31)
Mean number of books	1.31* (SD=2.75)	0.38 (SD=1.11)	0.21 (SD=0.68)
At least one peer-reviewed journal publication (%)	100%*	60%*	17%
<b>MEDIA VIOLENCE</b>			
Mean number of original peer-reviewed journal articles	6.38* (SD=6.37)	1.45* (SD=3.28)	0.28 (SD=0.89)
Mean number of original peer-reviewed media effects articles	4.54* (SD=4.09)	0.73* (SD=2.05)	0.12 (SD=0.53)
Mean number of original peer-reviewed media effects articles in top-tier journals (impact factor $\geq 2.5$ )	3.38* (SD=3.52)	0.48* (SD=1.59)	0.01 (SD=0.11)
At least one peer-reviewed publication (%)	100%*	37%*	13%

### *B. Comparative Analysis of the Amici Curiae "Experts"*

There is an enormous disparity of *relevant* (i.e., violence and aggression in general, or media violence in particular) expertise between the experts supporting California and those supporting the violent video game merchants. The thirteen experts who authored the Statement on Video Game Violence appending the Gruel Brief (Statement) are among the top media-effects researchers from the United States, Japan, and Germany, in-

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cluding Leonard Berkowitz, Edward Donnerstein, Douglas A. Gentile, and L. Rowell Huesmann.<sup>49</sup> All thirteen authors have published original research on violent media in peer-reviewed scientific journals. Over one hundred additional experts endorsed the Statement, including Victor Strasburger and Barbara J. Wilson, who recently published a treatise compiling hundreds of studies on the effects of media on children and adolescents.<sup>50</sup> Five experts in this group have served as president of the International Society for Research on Aggression, four of whom co-authored the Statement (Craig Anderson, Len Berkowitz, Ed Donnerstein, Rowell Huesmann).

As Table 1 shows, the authors and signatories of the Gruel Brief have significantly more expertise on violence, aggression, and media effects than the signatories of the Millett Brief. The Gruel Brief authors have authored eighteen times as many publications on violence or aggression as the Millett Brief signatories, and the Gruel Brief's signatories have authored eight times as many publications. The differences are even greater for peer-reviewed articles reporting the results of original empirical research on violence or aggression. As compared to the Millett Brief signatories, the Gruel Brief authors have published over twenty-eight times as many and the Gruel Brief signatories have published over fourteen times as many articles. A comparison of violent media effects articles published in top-tier journals is particularly striking: the Gruel Brief authors have published over 338 times more articles, and its signatories have published over forty-eight times more articles than the Millett Brief signatories.

Although the Millett Brief states that its signatories have “extensive experience with the research regarding the effects on individuals of media violence, including violence in video games,” this assertion is wholly unsupported by their scholarly publication records.<sup>51</sup> Of the eighty-two “expert” signatories to the Millett Brief, only 13% have published at least one article on media violence. At least two of these “experts” own or work for video game companies,<sup>52</sup> and none of these experts specialize in violent media effects on children. In fact, the Millett Brief signatories lack significant expertise on violence or aggression in general—only 17% have published at least one article on violence or aggression. In contrast, 100% of the Gruel Brief authors and 60% of its signatories have published at least one article on violence or aggression, and each of the Gruel Brief authors and 37% percent of its signatories have published at least one article on media violence. Significant differences also exist for most non-peer-reviewed publications (e.g., book chapters, essays, books).

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<sup>49</sup> See Gruel Brief, *supra* note 29, at 2a–3a.

<sup>50</sup> See VICTOR C. STRASBURGER, BARBARA J. WILSON & AMY B. JORDAN, CHILDREN, ADOLESCENTS, AND THE MEDIA 156–94 (2d ed. 2009).

<sup>51</sup> Millett Brief, *supra* note 37, at 1.

<sup>52</sup> Randy Brown is the “Chief Technology Officer” for Virtual Heroes, Millett Brief, *supra* note 37, at 3a, and Ricardo Javier Rademacher Mena is the founder of Futur-E-Scape, LLC, *id.* at 7a.

In summary, the Statement contained in the Appendix of the Gruel Brief was written and endorsed by the most recognized experts on violent media effects and violence generally. These experts concluded that violent video games *cause* cognitive and other harm to children and adolescents. Over one hundred additional researchers endorsed the Gruel Brief, many of whom specialize in violence, violent media, and the effects of media on children. In contrast, the signatories to the Millett Brief opposing the California law have minimal expertise conducting specific research on the effects of violent media or even research on aggression or violence more generally. As such, the Millet Brief signatories are relatively unqualified to offer “expert” opinions on the effects of violent video games on children.

#### CONCLUSION

In *Brown v. Entertainment Merchants Ass’n*, the Court should exercise its judgment critically and cautiously, considering that the vast majority of violent media experts concur that violent video games can cause serious harm to children. If the Court relies on scientific findings to determine whether the California Legislature may pass a law regulating the sales of violent video games to children without violating the First Amendment, then it should compare the credentials of the “experts” who signed conflicting scientific amicus curiae briefs. The Ninth Circuit failed to conduct this type of critical analysis. An objective comparison of the experts’ knowledge concerning the effects of violent video games on children demonstrates that the experts supporting California are far more qualified to offer opinions than the experts supporting the violent video game merchants. Given the obvious disparity in the two briefs’ credibility, the Court should reject the Millet Brief and uphold the California law because the scientific evidence clearly supports the findings on which the legislature relied.