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Argument

I: Research on violent video games has not demonstrated real-world harm

Psychologist Kevin Durkin, who reviewed the research on violent video games in 1995, reported that studies had found "either no or minimal effects." Indeed, he added: "some very tentative evidence indicates that aggressive game play may be cathartic (promote the release of aggressive tensions) for some individuals." Durkin reported in a 1999 follow-up survey that "early fears of pervasively negative effects" from video games "are not supported"; "several well designed studies conducted by proponents of the theory that computer games would promote aggression in the young have found no such effects" [4]. His findings were echoed by other scholars [5].

One proponent of the causal hypothesis, however, continued to search for evidence of harmful effects. In 2000, Craig Anderson and a colleague reported on a lab experiment and a correlational study they had conducted [6]. In the experiment, they had college students play part of either a violent or a non-violent video game, then tested them for aggression or "aggressive cognition" by asking them to give "noise blasts" to a game opponents or recognize "aggressive words" on a computer screen. A somewhat larger number of the subjects who played the violent game excerpt gave slightly longer noise blasts or recognized the words slightly more quickly. The differences were in fractions of seconds. In addition, it was highly questionable whether word recognition or noise blasts demonstrated anything realistic about actual intent to harm another person [7]. Nevertheless, Anderson concluded that exposure to "a graphically violent video game increased aggressive thoughts and behavior" [8].

In the same article, Anderson reviewed previous video game research. Of four experiments that found "weak" support for the causal hypothesis, he acknowledged that none had ruled out "the possibility that key variables such as excitement, difficulty, or enjoyment created the observed increase in aggression." Other experiments were negative or yielded "mixed results" and "little evidence" of adverse effect. Yet the following year, Anderson and a colleague reported on a new "meta-analysis" that they conducted, averaging the results of 33 separate studies on violent video games. Now, they concluded that the studies showed violent games "increase aggressive behavior in children and young adults" [9].

Scholars critiqued Anderson's new calculations as well as his interpretation of the underlying studies [10]. As they pointed out, if experiments with dubious results are

incorrectly interpreted as supportive of the causal hypothesis, the resulting meta-analysis will only magnify the error.

In 2000, Indianapolis passed an ordinance restricting minors' access to violent video games in arcades. The city relied on Anderson's "aggressive word"/noise blast experiment to assert that a causal connection had been established between violent games and aggressive behavior. The Court of Appeals struck down the ordinance, ruling that Anderson did not show that "video games have ever caused anyone to commit a violent act," or "have caused the average level of violence to increase anywhere." The court noted that violent themes have always been part of children's literature; to shield youngsters from the subject "would not only be quixotic, but deforming" [11].

II: Media-effects research overall has not demonstrated that violent entertainment causes real-world harm

A. Most studies have negative results

Fantasy violence has been a theme in art, literature, and entertainment since the beginning of civilization, but attempts to prove through science that it has adverse effects are less than a century old. In 1928, the Payne Fund commissioned sociologists to gather data on the effects of cinema violence through surveys and interviews. The process took four years, and resulted in multiple published volumes. The conclusions were guarded and equivocal, but caution was forgotten in a one-volume summary, *Our Movie Made Children*, which became a best-seller and claimed the studies had proved harmful effects [12].

In the 1950s, psychiatrist Fredric Wertham asserted that his informal research with juvenile delinquents proved violent comic books to cause crime. Wertham's methods were anecdotal; he had no control groups; and he mistakenly relied on correlations as proof of causation. But his assertions resonated with a public eager for answers to concerns about crime [13].

The next subject of study was television. Soon after TV's emergence, politicians began to stoke public anxieties about violent content. At the same time, a new field of psychology, social learning theory, posited that children imitate media violence. These psychologists believed, moreover, that such effects could be measured through laboratory experiments. Albert Bandura, leader of the social learning school, conducted experiments demonstrating that some children shown films of adults hitting Bobo dolls will imitate the behavior immediately afterward [14]. Even though Bobo dolls are meant to be hit, and aggressive play is far different from real-world intent to harm, Bandura announced that he had proved adverse effects from media violence. The announcement resonated politically, and the federal government was soon funding other studies.

The first major result of this funding was a 1972 Surgeon General's report that noted a "preliminary and tentative indication" of a causal link between TV violence and real-world behavior, but cautioned that this possible effect was "small," and only in children already predisposed to aggression [15]. As historian Willard Rowland recounts, however, legislators misrepresented the report's cautious conclusions, claiming that a definitive link had been proven [16].

Psychologist Jonathan Freedman, who began studying media-effects research in the early 1980s, was astounded at the disparity between the claims being made and the actual results. In a 1984 article, he reported that although there is a small statistical correlation between preference for TV violence and aggressive behavior, there is no evidence of a causal link. Likewise, he said, laboratory experiments, which can show a short-term imitation effect, are too artificial to offer much guidance on TV's real-world impact. And field experiments, more realistic attempts to gauge media-violence influence, had wholly inconclusive results [17].

Freedman found many instances of researchers manipulating results to bolster their theories. A field experiment in 1973, for example, widely cited in support the causal hypothesis, had numerous measures of aggression, all of which failed to produce any finding of adverse effects. Not satisfied, the researchers divided the children into "initially high aggression" and "initially low aggression" categories, and again compared results. Still there were no indications of harm from viewing violent programs ("Batman" and "Superman"). The initially high-aggression group, for example, became somewhat less aggressive after the experiment, no matter which programs they watched. But after more number-crunching, the researchers found that the initially high-aggression children who were shown violent programs "decreased less in aggressiveness" than the initially high-aggression children who watched neutral programs. They seized upon this one finding to claim they had found support for the causal hypothesis [18].

Probably the most widely cited research project in these years was a "longitudinal" study – tracking correlations over time – to determine whether early preferences for violent entertainment correlate with aggressiveness later in life. The researchers found no correlation between violent TV viewing at age 8 and aggressive behavior at age 18 for two out of three measures of aggression. But there was a correlation for boys on a third measure of aggression – peer reports. They seized upon this finding, and claimed proof of harm from TV violence [19].

They also later claimed a correlation between violent TV viewing in childhood and violent crime at age 30. Oddly, however, they did not disclose the actual numbers of violent criminals on whom they based their conclusions, and their published report did not mention a link between early violent viewing and adult crime at all. Nevertheless, one of the researchers, Rowell Huesmann, testified in 1986 before the U.S. Senate using a bar graph purportedly showing how violent TV causes violent crime. When, years later, author Richard Rhodes asked for the actual numbers, Huesmann acknowledged that the

correlation shown in his dramatic bar graph was based on just three individuals who committed violent crimes [20].

Huesmann went on to write a pivotal article on media violence in the next major government report, released in 1982 [21]. It was an opportunity, as Rowland observes, to "provide a resurgent call to arms" by those "disappointed in the cautious tone" of the 1972 report [22]. But many scholars disputed its claim that harmful effects had been proven [23]. Yale professor William McGuire, for example, wrote that despite the hype, two decades of media-effects research had found little or no real-world behavioral impact from violent entertainment [24].

Other researchers used correlation studies rather than experiments to test the causal hypothesis. One much-publicized study of this type found a correlation between the introduction of television in three countries and subsequent homicide rates. Without considering either the level of violent content in early TV, or other, more likely, explanations for the increased homicides, the researcher announced that "the introduction of television in the 1950s caused a subsequent doubling of the homicide rate" [25]. Many scholars disputed his claims, most notably two criminologists who reported in 1996 that homicide rates in many countries including the U.S. had decreased over the previous two decades despite increases in media violence [26].

Some correlation research flatly undermined the causal hypothesis. In 1986, for example, Steven Messner reported negative correlations between exposure to violent TV and violent crime in 281 metropolitan areas. Messner stated: "The data consistently indicate that high levels of exposure to violent television content are accompanied by relatively low rates of violent crime" [27]

Similarly, an ambitious cross-national study coordinated by Huesmann and his colleague Leonard Eron found no significant correlations over time between children's media violence viewing and aggressive behavior in Australia, Finland, the Netherlands, Poland, the U.S., or Kibbutz children in Israel. The only strong correlations were for two groups of Israeli city dwellers. Yet in this case, as Freedman recounts, most of the researchers "tried to put the best face on it that they could" in the book that resulted. "They hedged, did other analyses, and tried to make it sound as if the results supported the initial prediction that television violence would increase aggression." The Dutch researchers, however, did not hedge. "Their write-up came right out and said that there was no evidence of any effect." Huesmann and Eron refused to publish their chapter unless they revised their conclusions [28].

Some experiments, meanwhile, found more aggressive behavior associated with non-violent shows like "Sesame Street" and "Mr. Rogers' Neighborhood." Joyce Sprafkin, who conducted some of these studies, later described her reaction: "I decided to look back carefully at the field and say, well, what have other people really found?" For pre-school children, the field studies simply "did not support a special significance for aggressive television" [29].

This year, Jonathan Freedman published a thorough review of some 200 experiments or studies – all that he could locate – attempting to test the causal hypothesis. He found that most had negative results, even accepting as positive some experiments that used poor, almost ridiculous, proxies for aggression. Of 87 lab experiments, 37% supported the causal hypothesis; 22% had mixed results, and 41% were non-supportive. After Freedman factored out experiments using "the most doubtful measures of aggression," only 28% of the results were supportive, 16% were mixed, and 55% were non-supportive of the causal hypothesis [30].

Freedman was hardly alone. A 2000 review of media-violence research by the Federal Trade Commission reported that no firm conclusions about adverse effects can be drawn [31].

In 1994, a federal court in New York heard expert testimony on media-effects research. The case involved a county ordinance that barred dissemination to minors of any "trading card" that depicts a "heinous crime" or a "heinous criminal," and is "harmful to minors." Expert testimony from Jonathan Freedman and Joyce Sprafkin made clear that, contrary to popular belief, research on the effects of media violence has yielded inconclusive results. The court held that the county had not justified the ordinance with any evidence of harm from "heinous crime" trading cards [32].

B. Occasional positive results do not establish real-world harm

Despite the overall failure of media-effects researchers to prove harmful effects, some studies have reported positive findings. There are a number of reasons why these occasional positive results do not support the hypothesis that fantasy violence has adverse real-world effects.

The first reason relates to a fundamental but often-forgotten fact about social science research. Its results are "probabilistic." That is, the "identification of a causal relationship" through lab or field experiments "does not entail the conclusion that the identified cause produces the effect in all, a majority, or even a very large proportion of cases" [33]. Thus, even studies that show a "statistically significant" link between violent entertainment and aggressive behavior do not mean that the link exists for most, or even a substantial minority of, individuals. "Significant" in the statistical sense "does not mean 'important.' It means simply 'not likely to happen just by chance'" [34].

Another problem with drawing real-world conclusions from quantitative media-effects research is that both "violence" and "aggression" are very broad concepts. Researchers have used vastly different examples of violent content in the cartoons, film clips, or games that they study. Generalizations about all violence (or all "graphic violence") from these differing examples are not trustworthy, and fail to account for the many different contexts in which works of art or entertainment present violence.

Yet another problem is that experimenters have not always made their non-violent excerpts equivalent to their violent ones in respect to other variables such as general

level of interest or excitement. Freedman gives a striking example – an early, much-cited experiment that compared subjects' behavior after watching either an exciting film clip of a prizefight or a soporific clip about canal boats. Since the canal boat film was not nearly as exciting as the prizefight film, it was probably the subjects' general arousal level, not their imitation of violence onscreen, that accounted for a statistical difference in their subsequent lab behavior [35].

Measuring "aggression" is a further problem. For one thing, not all aggression is socially disapproved. For another, aggressive attitudes or "cognition" are not the same as aggressive behavior. Proxies for aggression in lab experiments range from dubious (noise blasts; Bobo dolls; "killing" characters in a video game) to ludicrous (popping balloons; interpreting ambiguous stories in a way that coders consider "more hostile"; recommending a grant termination) [36].

Moreover, aggressive play, whether in a lab or in the real world, is far different from real aggression intended to hurt another person [37]. Indeed, aggressive play provides a socially approved outlet for impulses that otherwise might take dangerous forms. Thus, the argument that the statistical link between media violence and aggression is as strong as the link between cigarette smoking and cancer (or other physiological analogues that are often used), even if it were true empirically, would be meaningless, because while scientists can measure the presence or absence of disease, psychologists cannot measure real aggression through the proxies used in lab experiments.

A final problem is the "experimenter demand" factor. Not only are behaviors permitted and encouraged in experiments that would be disapproved outside the lab, but subjects generally know what the researcher is looking for. Numerous scholars have noted this problem [38].

III: The functions of fantasy violence

The causal hypothesis has been popular within one branch of psychology. Other scholars take more nuanced and less simplistic approaches to both media effects and human aggression [39]. They look, as Professor David Buckingham puts it, at "the diverse and active ways in which children and young people use the media for different social and psychological purposes" [40]. MIT's Henry Jenkins summed up this approach when he wrote that many young people "move nomadically across the media landscape, cobbling together a personal mythology of symbols and stories, and investing those appropriated materials with various personal and subcultural meanings." Because of this wide variety of responses, "universalizing claims are fundamentally inadequate in accounting for media's social and cultural impact" [41]. The National Academy of Sciences has likewise pointed out that the causal hypothesis is simplistic because it fails to consider either how different individuals respond to identical stimuli, or how different individuals' psychosocial, neurological, and hormonal characteristics interact to produce behavior [42].

Art and entertainment influence different individuals in varying ways, depending upon their characters, intelligence, upbringing, and social situation. For a relatively few predisposed youths, the modus operandi of a crime depicted in a film might inspire them to incorporate those details into a violent act [43]. For a far greater number, the same violent work will be relaxing, cathartic, or simply entertaining.

Jenkins describes at least four functions of violent entertainment: offering youngsters "fantasies of empowerment," "fantasies of transgression," "intensification of emotional experience," and "an acknowledgment that the world is not all sweetness and light" [44]. Similarly, psychologist Jeffrey Arnett, studying a correlation between adolescents' reckless behavior and preference for violent music, found "sensation seeking" to be the independent factor that accounts for both the preference and the behavior. He reported that "adolescents who like heavy metal music listen to it especially when they are angry and that the music has the effect of calming them down and dissipating their anger" [45].

Experts on childhood and adolescence have long recognized the importance of violent fantasy play in overcoming anxieties, processing anger, and providing outlets for aggression. Bruno Bettelheim was a pioneer in describing these responses in the context of violent fairy tales [46]. As film historian Jon Lewis explains, Bettelheim understood that children have "terrible struggles, terrible fears"; they are "small, and fully aware that they have no power." Violent stories "offer a safe opportunity to fantasize about having some power in a world that otherwise seems prepared to crush them" [47].

Media scholars, eschewing artificial laboratory experiments and using real-world research methods such as interviews and observation, have explored why young enthusiasts are drawn to violent entertainment. Contributors to the anthology *Why We Watch* report that some children "seek out violent programming that features heroes triumphing over villains in an effort to control their anxieties," and observe that historically, as real-world violence in daily life has decreased, "representations" have "supplanted actual experience" as a way for youngsters to cope with their fears [48].

Author Gerard Jones recently interviewed psychiatrists, pediatricians, therapists, teachers, and parents on the attractions of fantasy violence. "I gathered hundreds of stories of young people who had benefitted from superhero comics, action movies, cartoons, shoot-'em-up video games, and angry rap and rock songs," he writes. For the most part, he found young people "using fantasies of combat in order to feel stronger, to access their emotions, to take control of their anxieties, [and] to calm themselves down in the face of real danger." Jones notes that one function of play is to explore, "in a safe and controlled context, what is impossible or too dangerous or forbidden" in reality.

In "focusing so intently on the literal," Jones says, many media critics "overlook the emotional meaning of stories and images."

The most peaceful, empathetic, conscientious children are often excited by the most aggressive entertainment. Young people who reject violence, guns, and bigotry in every

form can sift through the literal contents of a movie, game, or song and still embrace the emotional power at its heart. Children need to feel strong. They need to feel powerful in the face of a scary, uncontrollable world. Superheroes, video-game warriors, rappers, and movie gunmen are symbols of strength [49].

These attractions of fantasy violence are especially pertinent to video games. In 1995, communications scholar Joel Saxe used in-depth interviews "to assess a full range of player preferences and interpretations related to video games." He found that gamers express a "deep sense of thrill" in response to the "highly exaggerated, on-screen violent fantasy play." Transgression, rebellion, and the ability to defy the "formal rules of civility" in a fantasy world all contributed to the appeal. "As players elaborate the meaning of the gaming experience," Saxe says, they interpret the fantasy play as a "healthy outlet," providing "a means of releasing feelings of aggression." The play "is also linked to feelings of positive accomplishment," given the competitive format of the games, and the level of skill required [50].

Similarly, researchers in Denmark, using "qualitative methods such as in-depth interviews and observations," found "competition, challenge, and achievement" to be particular attractions of video games. "The violent elements in computer games are attractive as spectacular effects," and because "they prompt excitement and thrill." They are "in line with genres known from the film industry," such as action films and animation, and thus have inherited violence from other media that emphasize spectacular effects. The element of exaggeration "is fully recognized by children." In fact, children see the violence in video games as less anxiety-provoking than movies and television, because it is more clearly fantastic. The children in the investigation, some as young as five, were fully aware of the difference between reality and the exaggerated fiction of computer games [51].

Part of video games' appeal is their communal character. Often they are played in groups, and even when played alone, the iconography of the games forms a bond among many youngsters. A number of authors have described the elaborate communities associated with video games [52]. Saxe notes: "even though the screen fantasy play revolves around brute violence, the actual relations among players in the immediate play area are cooperative, if not amiable" [53].

Researchers who rely on lab experiments or statistical correlations fail to take account of this social context. As psychologist Jeffrey Goldstein explains, young people bring their entertainment choices to bear on "questions of identity, belonging and independence." Their taste in clothes, music, and video games "has a social purpose."

Until researchers look, not at isolated individuals forced to play a video game for a few minutes as part of a laboratory experiment, but at game players as members of social groups, we are unlikely to come to terms with violent, or any other, entertainment [54].

Likewise, the Danish researchers found that "children's fascination with violent computer games cannot be understood without considering these social aspects. The violent elements fascinate some children, but this fascination should not be mistaken for a fascination with violence in the real world. On the contrary, all children in the investigation repudiated real-life violence" [55].

It is true, of course, that many aggressive youths are attracted to violent video games. It is also true that many non-aggressive youths are drawn to violent games. For them, the games provide fantasies of empowerment, excitement, feelings of competence, and membership in a community. Jones observes: "heavy gamers as a population are overwhelmingly non-confrontational geeks" [56].

Games researcher Celia Pearce sums up the humanist understanding of violent fantasy games: "Most of the alarmism about violence," she writes, "is based on a profound misunderstanding about the social and emotional function of games. Games allow people who are midway between childhood and adulthood to engage in fantasies of power to compensate for their own feelings of personal powerlessness. This role-playing function is important for children of all ages" [57].

Conclusion

Stephen Jay Gould observed that efforts to invoke science to "validate a social preference" can distort both science and public policy; the risk is greatest when "topics are invested with enormous social importance but blessed with very little reliable information" [58]. Censorship laws based on bogus claims that science has proved harm from violent entertainment deflect attention from the real causes of violence and, given the positive uses of violent fantasy, may be counterproductive. For these reasons, the lower court's reliance on assumptions about adverse effects from violent video games should be rejected, and the judgment below should be reversed.

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