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Consensus on Media Violence Effects: Comment on Bushman et al.

Abstract

We summarize the main findings of Bushman, Gollwitzer, and Cruz (this issue), highlights its empirical contributions, and notes interesting patterns and implications for future research. We also introduces the denialism perspective to the consensus among true media violence scientists and pediatricians versus claims of nonconsensus by those highly motivated to deny evidence of harm. The results demonstrate the invalidity of the common denialist claim that no consensus exists among experts on the reality of harmful media violence effects on children and adolescents. We note the likely bias against finding consensus of harm among the communication and media samples, given the prevalence of non-experts among their memberships. This article also presents a new breakdown of the Bushman et al. findings, highlighting the high consensus for causal screen media violence effects on aggression, which fairly closely mirrors findings from that voluminous research literature, and compares this to the lack of consensus on the harmful effects of print media violence, which corresponds to a quite small research literature. We conclude with brief discussions of factors underlying denialism, research domains relevant to the study of denialism, implications of widespread gamer denialism among children and adolescents for conducting research on media violence effects, and a call for research on denialism and on remedies for it in a world that needs accurate beliefs to effectively deal with harmful products such as screen violence, greenhouse gases, and viruses.

Bushman, Gollwitzer, and Cruz (this issue) report a very interesting survey study of the beliefs held by several key groups who are (or at least ought to be) concerned about potentially harmful effects of violent media on children. Their well-conducted survey provides convincing evidence that there is considerable consensus among members of media and communication societies, pediatricians, and even parents that exposure to media violence increases hurtful behavior by children. These consensus beliefs mirror the largely consistent research findings of actual negative effects of violent media on thoughts, feelings and behaviors (e.g., Anderson et al., 2003, 2010; Anderson & Bushman, 2002; Bushman & Huesmann, 2006; Greitemeyer, & Mügge, 2014).[1] This commentary highlights the importance of these findings, notes why the media and communication samples may be biased against believing in harmful media effects (relative to a sample of true media violence experts), and discusses several issues involving vocal critics of mainstream research findings.

Much like other well-known cases in which powerful profitable industries have waged disinformation campaigns against specific scientists and general fields of scientists whose research suggests that their products cause harm, the television, film, and video game industries and their apologists spend considerable time, effort, and money sowing the seeds of doubt about the science in this area.[2] As so aptly noted by Nijhuis (2008), the industries (and their apologists) don't have to prove anything in order to win; all they have to do is sow the seeds of doubt. They "win" if enough doubt is sown to convince the public and public policy makers "to reject the case for taking action to tackle threats to health." (Diethelm & McKee, 2009, p. 2). In short, if they can prevent a strong consensus from emerging, the denialists win.

Denialism

Denialism, the act of denying factual information, comes in many forms, arises from a range of motivations, and is supported by many psychological processes. Some of the most blatant historical cases do not directly involve science, but instead deny historical events, such as the Holocaust. But many cases do involve science "facts." We put the word "facts" in quotes to highlight one reason why denialism is so successful when its tactics are used in scientific domains. Specifically, scientists are trained to not use such absolute words, because scientific conclusions *should* be seen as subject to change if the data and the scientific field changes. That is, the good scientist role includes being extremely cautious about drawing firm conclusions, and teaches us to avoid the F-word ("fact"). We are supposed to be skeptical, and perpetually open to criticism and alternative perspectives.

Of course, nonscientists (including the general public, journalists, politicians…) don't understand this reluctance of scientists to use the F-word or its scientific cousin "cause" (the C-word). Denialism plays on this reluctance in numerous ways, not the least of which is to suggest a lack of consensus among scientists about whether a particular product *causes* harm, and to couch their criticisms of the consensus science (and scientists) in terms of normal scientific skepticism (Anderson & Gentile, 2008; Anderson, Gentile & Buckley, 2007; Jack, 2011). The tactics used by denialists are well known, and according to Diethelm and McKee (2009) include: (1) identification of conspiracies; (2) use of fake experts; (3) selectivity; (4) creation of impossible expectations of what research can do; and (5) use of misrepresentation and of various logical fallacies. It is outside the scope of the present comment to identify specific instances of use of each of these tactics by media violence denialists; we nonetheless invite readers to keep these tactics in mind as they read articles and news reports about the media violence "debate." We bring

up the issue of denialism in this comment because the Bushman et al. article identifies and

debunks one denialistic tactic.

Bushman et al. Findings

In Figure 1, we highlight the primary screen media (television, movies, video games) and

print media (comic books, literature) results to facilitate our discussion. One notable aspect of

Figure 1 is the high degree of consensus that screen media violence is a causal risk factor for

aggressive behavior. This result shows that the screen media industries' and their apologists'

claims of a lack of consensus are greatly overstated. There is considerable consensus among

members of media and communication societies, pediatricians, and parents. The whopping

differences between the Causal and the Not Causal columns practically leap from the page. In

short, these results debunk one use of the denialist tactic of misrepresentation.

Also obvious from a quick look at Figure 1 is that there is relatively little consensus about

print media violence effects on aggressive behavior. This comparison of screen and print media

consensus mirrors the research literature in at least one interesting way. Specifically, the research

literature on screen media violence effects is much larger and more compelling than the literature

on print media violence effects. We are not saying that print media violence effects don't exist

(e.g., Bushman, Ridge, Das, Key, & Busath, 2007; Coyne, Ridge, Stevens, Callister, & Stockdale,

2012). But, there is much less research on print media effects, and there is little (if any) evidence

of long term effects of print media violence on aggression; relevant longitudinal and cross-

sectional studies are virtually absent. Furthermore, there are theoretical reasons to believe that *on

average*, print media violence effects are likely to be considerably weaker. One needs only to

consider the amount and vividness of violence encountered per hour while reading the Lord of the

Rings trilogy versus watching the associated movies, versus playing the associated video games,

and consider the context (or lack thereof) between typical screen versus print media violence, to get an idea of the vast differences between the psychological processes engaged by different media types. And, consider the reading skills (and therefore age) required to read and enjoy that book series, versus the very young age at which one can comprehend and participate in the violence displayed in the movies and video games.

An additional point of interest concerning screen media violence consensus arises from a close inspection of differences between the four samples. Specifically, there is less consensus among some of the sampled groups than there logically should be. Logically, people who aren't themselves true experts in a scientific domain should base their beliefs about that domain on the statements made by the true experts. For example, our beliefs about the reality of global warming are based on the statements of panels of global climate scientists. Somewhat closer to home, even though all of the present authors have expertise in the broad domain of human aggression, none of us are experts on the behavioral effects of testosterone on aggression in mice. Therefore, we must rely on true experts in that domain for any beliefs we might hold about testosterone and mouse aggression. It would be foolish and silly for us to denigrate the findings of the mouse-testosterone-aggression experts because our personal experiences with mice seem different; it would be unethical for us to proclaim to the world that our views of mouse testosterone-aggression findings were as valid as those who actually study the phenomenon simply because we have done research on the broad topic of aggression.

People who are not true experts on media violence research (see Anderson & Gentile, 2008, p. 287, for suggested criteria) should either have no firm opinion about the issue or should rely on reports by the true experts to form their opinion. And, every major scientific expert panel that has reviewed the research on screen media violence effects has come to the same conclusion,

that media violence (usually meaning screen violence) is a causal risk factor for increased

aggressive behavior. This includes expert panels created by the American Academy of Pediatrics,

the American Psychological Association, the American Academy of Child & Adolescent

Psychiatry, the American Medical Association, the American Academy of Family Physicians, the

American Psychiatric Association, the U.S. Surgeon General, the International Society for

Research on Aggression, the U. S. National Institutes of Health, and most recently the Society for

the Psychological Study of Social Issues (SPSSI, 2014), and among others. Scientific panels in

other countries have reached the same conclusion. Nonexperts should either admit (to themselves

and others) that they really don't have a belief about media violence effects (if they are unaware of

what the true experts have concluded), or should adopt the position of the true experts.

Interestingly, there is one notable group missing from the Bushman et al. consensus study:

the small group of true scientific experts on media violence. It seems safe to assume that this

group, were it to be identified and sampled, would yield even higher levels of consensus, given

that subsamples of such true experts have repeatedly written reports finding such evidence (e.g.,

the U.S. Surgeon General's panel that published the Anderson et al. 2003 report).

So, why wasn't consensus about the causal effects of screen violence even higher in

Bushman et al.'s study? Of particular interest (and some concern) is the fact that members of the

sampled media and communication societies didn't show substantially greater accuracy about

screen violence effects than did the parents. There are likely several factors involved in the

differences among the four groups. The very high consensus found in the pediatrician sample may

result from the fact that the American Academy of Pediatrics has done a good job of

communicating the true experts' findings to their members, something that neither of the other

sampled societies (media, communication) has done. And of course, pediatricians see large numbers of children, many of whom have behavioral problems that the parents discuss with them.

The other two sampled societies both have substantial proportions of members who are neither behavioral science experts nor researchers in media violence, but rather are people interested in learning about effective ways of using media in the real world. Some do not have a research doctorate in an appropriate behavioral science, some are employed by media industries, and some of them could reasonably be characterized as media violence denialists. In other words, we cannot assume that all members of these two societies are "researchers" or experts in media violence effects research. Indeed, many of the top media violence experts are not members of these societies. To be sure, many members are true experts, but many are not. Many likely are strong supporters of freedom of speech rights as embodied in the U.S. First Amendment (as are we), many are great fans and consumers of violent media (as are some of us, including the first author), and some may feel threatened by the possibility of admitting the harmful effects of violent media (see Laurin, Kay, & Fitzsimons, 2012; Nauroth, Gollwitzer, Bender, & Rothmund, 2014).[3] It would be interesting to see what level of consensus would emerge from membership of other organizations that vary in terms of their relevant expertise and their own expert panel statements concerning media violence effects, such as the *International Society for Research on Aggression* (ISRA) and the *Society for the Psychological Study of Social Issues* (SPSSI).

The Bushman et al. survey did not include an option allowing respondents to indicate that they either had no opinion or did not believe that they had sufficient knowledge to have an opinion. A substantial portion of those who checked the "neither agree nor disagree" option may have been of this type. This is not necessarily a weakness of the study for its intended purpose, but would be a question of interest for future research.

Another point of interest is that the somewhat lower level of screen media consensus reported by parents (relative to pediatricians) can be viewed as the proverbial glass that is either half full or half empty. The pessimistic view is that it demonstrates just how effective media violence denialism has been; despite the consensus among true experts in this domain over several decades, despite public statements by various expert panels (again, over several decades), and despite work by AAP and other parent/child education and advocacy groups, many parents are still ignorant about the true facts of screen media violence effects. This ignorance also helps explain why so few parents take an active role in regulating their children's use of violent media, which has been documented in many studies.

The optimistic view of the parent results is that despite the major efforts of media violence denialists, and despite the failure of news journalism in general to accurately portray the state of the science (Bushman & Anderson, 2001; Martins, Weaver, Yeshua-Katz, Lewis, Tyree & Jensen, 2013), most parents do have the factually correct belief that screen violence is a causal risk factor for aggression. The extent to which that belief comes from personal observation of their own children; from news reports they have read; from the educational efforts of pediatricians, parent/child support and advocacy groups; from schools; or from other sources is unknown, but would be worth further study.

Future Studies

In the history of research on the smoking/lung cancer link, one fascinating finding was that the first group of physicians to quit smoking was thoracic surgeons, those who most directly saw the ravages of smoking on the lungs. It would be interesting to know whether a similar phenomenon is occurring among psychologists. Specifically, which groups of psychologists are most likely to closely monitor and control their children's exposure to media violence? Do

members of societies with greater expertise in media violence (e.g., ISRA) or greater interest in applying psychological science to real world issues (e.g., SPSSI) show greater or lesser consensus on media violence effects than the groups studied by Bushman et al.?

Another set of important questions in need of research concerns the extent to which self-image, self- identification, or self-involvement with media violence drives denial of the scientific findings. Nauroth et al. (2014) showed that gamers feel stigmatized by and are angry about research findings that demonstrate negative effects of violent games. Bender, Rothmund, and Gollwitzer (2013) demonstrated empirically that as research participants, gamers will sabotage studies of violent video game effects on aggression, and do so even when a cover story is present.

In general, several large research domains (e.g., attitudes, decision under uncertainty, motivated cognition, self-identity) are relevant to questions about how people deal with information that is discrepant with prior beliefs or important values. Generally, they show that people will go to great lengths to defend importantly held beliefs and values, including selective searches for information that supports their position, engaging in biased information processing and perception, and selectively attending to and remembering biased information. Classic studies of this type includes Lord's work on capital punishment beliefs (Lord, Ross, & Lepper, 1979). Similarly, Anderson's work on social theory formation, perseverance, and change found that even trivial beliefs formed on the basis of weak or even hypothetical data can survive logically compelling challenges (e.g., Anderson, & Lindsay, 1998; Anderson & Sechler, 1986).

Basically, we would expect that people who strongly identify with violent games—e.g., gamers, producers or sellers of games— are most likely to deny any harmful effects, because such effects threaten either the self ("I've played violent games all my life, I'm not an aggressive person, so your claim of harmful effects can't be true"), some important self-related aspect of one's life ("I

sell video games to children, I'm a loving parent and a good citizen, so your claim of harmful effects can't be true"), or even their job. As research participants, such people also are the most likely to intentionally sabotage studies in which they believe the link between violent games and aggression is being assessed, a sort of "reverse" demand characteristics effect (Bender, Rothmund, & Gollwitzer, 2013). Sabotage can easily be done in most (but not all) studies, by intentionally behaving very non-aggressively in standard laboratory aggression paradigms, by reporting low levels of past aggression in survey studies, or by under-reporting one's own amount of exposure to violent media.

There are numerous theoretical reasons for this denial and these behavioral reactions, including cognitive dissonance, self-esteem maintenance, and other motivated cognition processes. Indeed, the fact that a very few researchers consistently fail to replicate well-established findings may be the result of their using research methods that fail to adequately disguise the violent media/aggression aspect of their studies (see the comparison of different research groups by Greitemeyer, & Mügge, 2014). All it would take would be a revealing study name on a sign-up sheet, a weak cover story on a consent form or in the instructions, or even the reputation of the lab as being one that conducts research on media and aggression.

Even a cursory inspection of gaming sites reveals that even children and adolescents are well aware of the media violence and aggression issue. On one hand, this makes conducting media violence research in the modern era much more difficult than in past eras. It also increases the need for researchers to: (a) more fully disclose their study names (on sign up sheets and/or consent forms), recruitment procedures, cover stories, and instructions; and (b) more carefully assess and report participant suspicion. On the other hand, this also provides an opportunity to investigate denial and perseverance processes in the context of highly motivated beliefs and

values, as interesting research topics in their own right. Similar research can (and should) be done on global warming denialism (for instance), and on discovering procedures that reputable scientific and public policy groups could use to help the general public to accurately understand scientific facts that are of relevance to them personally and to the welfare of larger society (e.g., that vaccinations do not cause autism). Continuing to wallow in artificially created doubt is nonproductive, regardless of whether that doubt is created by a profitable business or by more individually motivated denialists.

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Figure 1. Beliefs about the causal effects of screen (television, movies, & video games) and print

media (comic books & literature) violence on aggressive behavior by members of a scholarly

media society, a scholarly communication society, pediatricians, and parents. Note: Not

Causal is the combined total of strongly disagree and disagree categories, Don't Know is the

neither agree nor disagree category, and Causal is the combined total of strongly agree and

agree categories. Data Source: Bushman, B. J., Gollwitzer, M., & Cruz, C. (this issue).
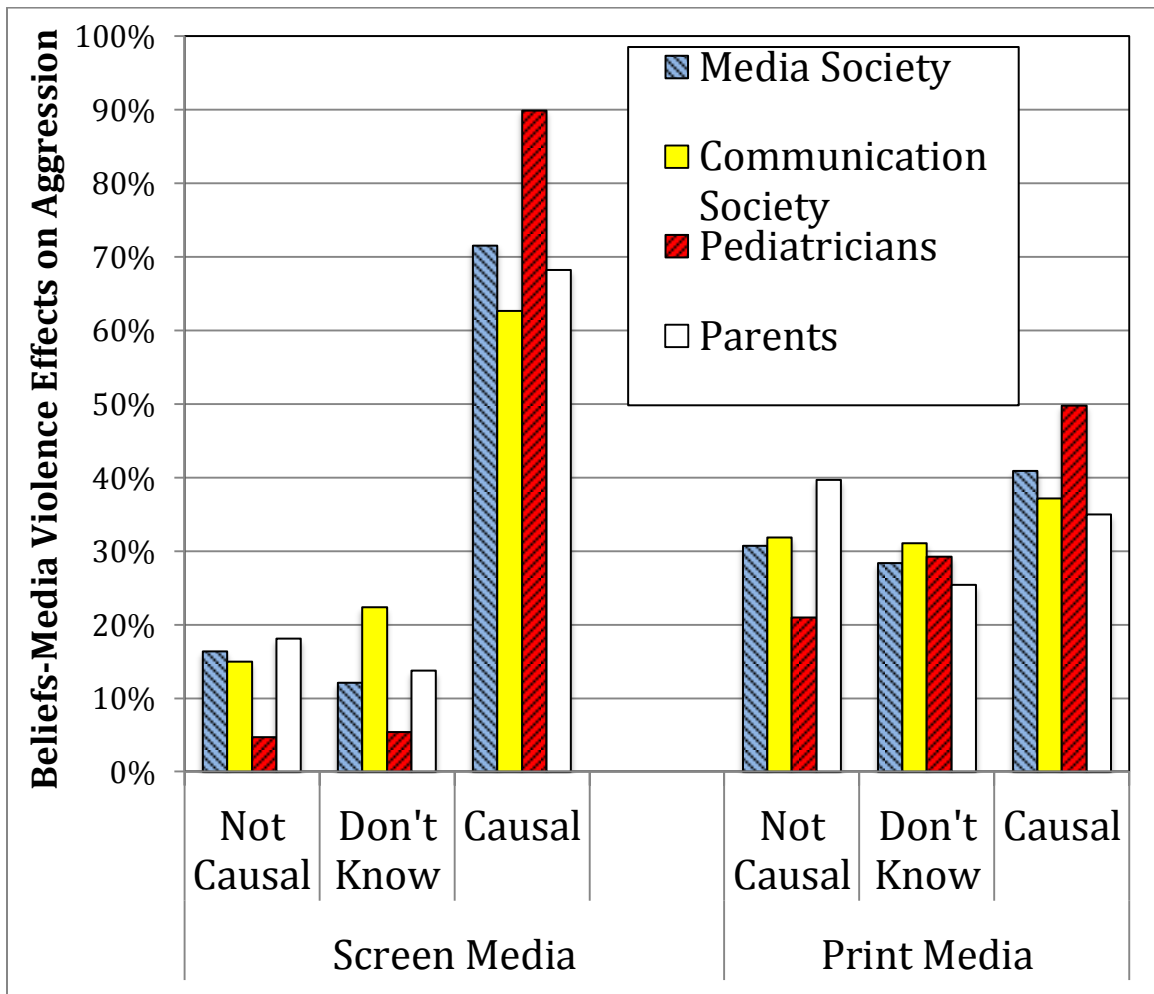
Footnotes

[1] Only comprehensive reviews are included among the examples. There are additional instances of highly selective (and frequently biased) reviews, but they are less relevant because the comprehensive reviews cited here include considerably more relevant studies. There also are many excellent older comprehensive reviews; see Anderson et al. (2003) for citations to many of them.

[2] Scientific denialism examples include tobacco effects on cancer and heart disease, asbestos effects on cancer, mercury poisoning, lead poisoning, Dioxin poisoning, acid rain, evolution, global warming, HIV as a cause of AIDS, false claims about vaccines and autism, and real findings on football/brain injury effects.

[3] Of course, scientific consensus that violent media exposure is a causal risk factor for later aggressive and violent behavior does not (and should not) directly translate into public policy that restricts the production, dissemination, or use of such media by anyone; other factors play major roles in public policy (Anderson & Gentile, 2008).

Figure