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She Said/He Said: A Peaceful Debate on Video Game Violence

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The present article aims to discuss the media violence debate in a cordial manner between 2 scholars who differ in their views on media violence effects research. Although the media violence debate often seems obfuscated by à priori fixed positions that leave little room for nuances, the scholars who discuss their points of view in the current article wish to show that it's possible for 2 scholars with differing views, and different cultural backgrounds (i.e., U.S.A. vs. Europe), to discuss research on both "sides" in respectful ways. In the current dialogue–article, they take turns in asking questions, express concerns, and provide answers to enrich each other's thinking and eventually the body of knowledge. They address topics like the complexity of explaining human behavior and thus effects of media behavior, the issue of defining violent games and measuring aggression, media effects as a public health concern, cultural differences in views on sex and violence in the media, moral values as well as their own position as parents observing their teenager's media use. In sharing their thoughts, they enrich the scientific debate on the pertinent issue of media effects and suggest directions for future research.

Keywords: video games, violence, aggression, debate

Some recently published papers in a leading journal demonstrate that the debate on media violence effects is a lively one with opinions that vary largely and consensus on how to read the research results does not seem to be within reach (Anderson et al., 2010; Ferguson & Kilburn, 2010; both in *Psychological Bulletin*). On the one hand, scholars claim that exposure to violent media content, in particular as portrayed in contemporary sophisticated digital games, may have harmful effects in terms of increased aggressiveness (affect, cognitions, and behavior; Anderson et al., 2010; Bartholow, Bushman, & Sestir, 2006; Huesmann, Moise-Titus, Podolski, & Eron, 2003; Konijn, Nije Bijvank, & Bushman, 2007; Krahé, 2014). On the other hand, scholars claim that exposure to video

game violence has negligible effects on aggression (Adachi & Willoughby, 2011; Breuer, Vogelgesang, Quandt, & Festl, in press; Ferguson & Kilburn, 2009; Przybylski, Deci, Rigby, & Ryan, 2014; von Salisch, Vogelgesang, Kristen, & Oppl, 2011). We acknowledge that many scholars go beyond the violence inherent in a lot of gameplay by investigating, for example, positive effects on spatial orientation, strategic planning, or fine motor skills (Kühn, Gleich, Lorenz, Lindenberger, & Gallinat, 2014; Okagaki & Frensch, 1994), or benefits for personal health, learning, and development (Granic, Lobel, & Engels, 2014; Kato, Cole, Bradlyn, & Pollock, 2008). However, our dialogue in the following focuses on whether aggression effects from violent media use do/don't exist. Certainly, scholars from both sides acknowledge that aggressive behavior originates in a number of factors, yet, not all agree that exposure to media violence, or playing violent video games, is one of those causes or risk factors.

Opinions as expressed in various papers often seem polarized and may also reflect intense debates on the topic taking place in the public sphere and in politics. Perhaps, the debate may sometimes get a little more heated than actually

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intended. Indeed, in this article, we take the perspective that scholars on both sides are speaking passionately, if in good faith, on their best reads of data. In the current dialogue—article, the authors wish to overcome the tendency for acrimony between scholars on the two sides of this debate while taking turns in posing questions and providing answers and to overcome taking position against one or the other *à priori*. In doing so, they address topics like the complexity of explaining human behavior and how to read the evidence on media effects, difficulties in defining violent games and the measurement of aggression, matters of morals and public health concerns, cultural differences in views on sex and violence, as well as their own position as parents guiding their children’s media use.

While at times the authors seem to be challenging each other’s position, they also have a different approach stemming from different backgrounds: one author is from the United States while the other is from Europe. Nevertheless, they started the current dialogue with the sincere plan to focus on the content and intentions of what she/he tries to convey in pursuing a lively debate as a good thing.

At the start of our dialogue, we suspected that by the end of our dialogue we would likely still continue to disagree on many things. However, we could also find common ground on some issues we had not realized before. Importantly, we intended to communicate that disagreements within this field creates the opportunity to learn from one another even if our core opinions do not necessarily change readily. In our discussion, we each take turns asking questions of the other. The “rules” agreed on was that each of us could ask a question of the other, allowing the other to reply. The original questioner could then ask a follow-up question, with reply. Then the roles were reversed for the second question and so on. In addition, we negotiated beforehand that we would respect each other’s opinions, not use impolite or denigrating language, and offer suggestions to the other if we felt their replies might have crossed a line from what would be a constructive dialogue. We also agreed in advance on the topics we would consider. We began through an informal exchange of thoughts and ideas via email, and those exchanges became the nucleus of the current article.

To the best of our knowledge, no dialogue like this has been published. We hope that readers will find it as illuminating as we have and will enjoy our exchange. Humbly, we hope our dialogue will demonstrate that it is possible for scholars, in good faith, to reach very different conclusions while respecting the other’s position and broadening one’s scope.

The Complexity of Explaining Human Behavior and Reading Evidence

In this first section, we discuss the difficulties in understanding and explaining human behavior in the context of social science research. Most scholars agree that human behavior, including aggression and violent behavior, is immensely complex. Even the degree to which violent and aggressive behavior are similar and distinct is complex. Media effects, and whether or not they exist, are only one part of a very complex constellation of potential influences on human behavior. Further, understanding the distinction between correlational and causal data, and the degree to which experiments can be generalized to real-world phenomena remain controversial. In this section, we discuss some of these issues with an eye on how scholars with differing views conceptualize them.

Elly: I sometimes get the idea that there is a lot of misunderstanding around causality. Often it seems that causality is seen as a one-to-one causality or one-to-one relationship, like “I put some media violence in and aggression will come out.” Obviously, this is not how causality should be understood. Compare, for example, how most people consider “causality” regarding smoking cigarettes on lung cancer. Obviously, smoking occasional cigarettes does not substantially increase the risk of lung cancer. Yet, given certain circumstances and individual susceptibility, cigarettes are clearly identified as a causal factor for cancer, accumulating the more one smokes. Yet, the exact dividing line between low risk and high risk may be difficult to specifically identify for any particular individual. In my view, the same holds for media violence exposure. It will not be the only cause of aggression; certainly, a number of factors will need to coalesce with media violence to lead to detrimental effects. Still then, it may contribute as a causal factor—in combination with other factors.

Chris: In my impression, this is one area scholars on both sides seem to be talking past one another. To the best of my knowledge, no “skeptic” is remotely talking about univariate effects. I worry a bit that the “we never said media violence is the ONLY cause of aggression” defense I see sometimes takes the form of a straw-man argument. Such a rational-sounding argument seems to imply that skeptics don’t understand multivariate causality. Of course we do! I don’t know of any scholars on either side of the debate who wouldn’t agree with the statement that aggression or violence is multidetermined. However, that doesn’t mean “all have won and must have prizes.” Just because we agree violence/aggression is multi-causal doesn’t mean that media violence has to be one of those causes. For me that’s what the debate is about . . . is media violence one of the causes of violence/aggression in the real world. Not whether is it the only cause. Skeptics agree that violence/aggression is multidetermined . . . but disagree that media violence is one of those causes. To put it a bit facetiously (without any intent to make light of your position), we agree that violence/aggression is multidetermined . . . but that doesn’t mean that rainbows or pancakes cause aggression. Obviously, positing media violence as a cause of aggression is more plausible than rainbows, but the same basic principle holds . . . it depends on evidence and the skeptical side doesn’t find the evidence convincing that media violence is one of those causes.

Elly: Yes, so, the essence of the debate seems NOT about whether media violence is the ONLY cause of violence/aggression in the real world, but rather whether media violence is one of many causes at all. Well, then we face the problem of determining what evidence counts as convincing evidence that media violence is one of those causes. I do believe that enough studies and meta-analyses showed such an influence (Anderson et al., 2010; Bartholow et al., 2006; Gentile, Lynch, Linder, & Walsh, 2004; Huesmann et al., 2003; Konijn, Veldhuis, & Plaisier, 2007; Krahe, 2014), yet, indeed, often in coalescence with other variables. I also agree with the skeptics that correlations do not show causality (though showing a relationship also has some validity be it not in terms of causality), but carefully controlled experiments do. Furthermore, I also agree that measuring “aggression” is problematic, and is so in many

studies. But this does not mean that all experiments are without value. I am convinced by at least a substantial number of those studies that media does have the power to affect individuals (and it may do so in “feedback loops” through, e.g., accumulating peer and media influences).

Chris: Yeah, I think it really boils down to our read of the evidence, which we see as different, and whether the studies, whether correlational or causal, are persuasive or not. By contrast, I point to both meta-analyses and individual studies that find little evidence for videogame violence effects (Adachi & Willoughby, 2011; Breuer et al., in press; Ferguson & Kilburn, 2009; Przybylski et al., 2014; von Salisch et al., 2011). And just as you say that enough studies, correlation, longitudinal, or experimental, exist to support links, I believe enough studies now exist returning failed replications so as to disconfirm such a position. It’s a matter of how we weight differing studies with differing results, I think.

Elly: Makes me curious though to what you would see as evidence; what type of research or what type of results would convince you?

Chris: It’s a great question and a difficult one to answer. Should we really ever be “convinced” about a theory? For me, science is about attempts to falsify theories, not “prove” them . . . to the degree a theory can resist falsification efforts, I do become more convinced. When a theory appears fragile to falsification, I become less convinced. I am not terribly convinced by “obedient replication” or “obliged replication” as defined by Ioannidis (2012) in which researchers repeatedly replicate their own results and theories. But if more skeptical researchers can produce the same findings, that can be more convincing. That’s why, for instance, I consider advertising effects very different from media violence effects. I originally came at both issues skeptical, but could reproduce advertising effects (on healthy eating choices in young children) but can’t reproduce media violence effects in either youth or young adults. So, for me, it’s about replication, not just by a theory’s advocates, but by its detractors as well.

I suppose one issue that is worth raising is the lack of clarity in our field, psychology in general, that is, about what is or is not convincing evidence? For instance how many failed replications are needed to put a theory into doubt?

Perhaps there is a greater issue for psychological science that makes it very easy for two scientists to look at the same data and see very different things?

Elly: It seems a little of a paradox that scientists apparently do not agree on what counts as evidence? On the one hand, we try to find empirical evidence to support theoretical ideas in a most “objective” manner (going beyond the anecdotal) and then, once we have such results, we debate again on how convincing it is, or is not, and here again the personal level enters. It seems that, indeed, in the end we do or do not “believe” the evidence, or take the obtained results as evidence depending on our personal perspective?

Curiously, no one seems to have such difficulties with medical scholars emphasizing the “harmful part” and take it for granted that, fortunately, most are not affected—like with media. However, media scholars who question the potentially harmful or undesirable effects of violent media content, do claim that media use like video gaming has positive effects (e.g., improving spatial skills). For sure, as in medical sciences—both sides occur: if media can have positive effects, then it can also have negative effects. This all depends on the specific contents, individual factors and processing of content.

So, I think, perhaps that the field should go beyond general effects and start looking into idiosyncratic effects . . . the idea that particular media content might both help and hinder different individuals . . . For example, driven by the user’s own motivations, in interaction with the content, and guides “the processing of the content itself” . . .

Chris: Well, I do think it’s less one side likes “the evidence” and the other does not, but that different sides weight different pieces of evidence differently and, where the evidence is ambiguous, may weight it differently. I think too, even medical scholars have to be careful about exaggerating harms, what I might call warning bias . . . look at the mess that has become of dietary science (“Eggs are good for you . . . no bad . . . no good . . .”) and how frustrated people are with that. Medical science also has its own issues with publication bias and such. And I think we have to be careful to resist problematic comparisons with medical science . . . we’re talking two very different fields with

two different types of outcomes and predictors. No less than the Australian Attorney General’s Office (2010) has warned that such comparisons are misleading.

As for positive effects, as you know, I’ve tended to be concerned that scholars have a tendency to exaggerate both positive and negative effects of video games (see also Boot, Blakely, & Simons, 2011). But here again, we can’t just assume because media has one set of effects (if it did) than it must somehow be balanced by another set of effects like a theoretical yin/yang. If media have positive effects, could they also have negative effects? Of course. MUST they have negative effects? Not at all.

Elly: Well, the issue is, in my view, that scholars who strongly favor positive media effects question the negative effects, and put such research into doubt while similar arguments may hold for questioning the positive effects. And the other way around for scholars who strongly favor negative media effects. In my view, both effects have been shown in some solid research while other studies failed to show such effects. This all depends . . .

Chris: I do agree with you there . . . and as you know, I’ve gradually become skeptical of effects being dramatic in either direction (Boot et al., 2011). To me, things like visuospatial cognition and aggression are two very different sorts of outcomes. Of course it’s possible for video games to have one type of effect, but not the other, or they could have both, or neither. And, ultimately, each purported effect must be tested independently, and empirically, which is not to say they couldn’t be examined simultaneously in a single sample.

The Problematic Case of Defining Violent Content and Measuring Aggression

Chris: I do really like your idea of idiosyncratic effects though, and I’m hoping we’ll return to that, but first I wanted to explore with you a little bit, what is a “violent video game” anyway? In a recent US court case (Rushton, 2013) one prominent video game scholar acknowledged that even games like Pac Man could be considered “violent video games” given lack of clarity in academic definitions. It seems that we’re making a lot of assumptions about a wide range of games occupying a sin-

gle, collective, conceptual space. Looking back historically, I see that some of the old studies from the 1980s used games like Pac Man (Cooper & Mackie, 1986), Bezerk (Graybill, Strawniak, Hunter, & O'Leary, 1987), or Zaxxon and Centipede (Anderson & Ford, 1986) and in some cases claimed to find the same kinds of effects as recent studies using first-person shooters. I think these articles were included in recent meta-analyses (Anderson et al., 2010) with some assumption that these studies all occupied the same conceptual space. I guess I worry a bit that we haven't looked back on some of these old studies, involving games I think few people worry about today, and if we're still finding or not finding similar effects, what does all of this mean? If we no longer worry about the studies on Zaxxon and Bezerk, but they're not much different from what's being done today, are we just kind of repeating the past? Do you think there's some more meaningful way that we might reconceptualize the video game experience that moves beyond what I'd suggest is the oversimplified debate on "violent video games?"

Elly: Yes, as with many issues and objects in the social and psychological arena, implied meanings may change when time passes by. Ads that we considered persuasive some 50 years ago, or movies and TV shows for that matter, may have less impact today. This does of course not mean that we should consider all of that meaningless or that "persuasive ads" or "moving films" do not exist. As indicated before, the impact of media depends on how it is received, by whom and under which circumstances. Some games might be considered violent by me but not by you, or invoke aggressive behavior in younger boys but not in older girls, etcetera. One might argue that such older studies using older games should not be included in contemporary meta-analyses; however, not including them may even lead to stronger effect sizes over all. Likewise, those studies have been carried out within the perceptual context of that time. We also have to acknowledge that some concepts are transient, yet, are nevertheless well understood and deserve to be studied. A good example in this respect is "emotion"—scholars never agreed on its definition, yet, most people do understand what is meant by emotion and scientific research on emotions is prosperous nowadays (Döveling, Von Scheve, & Konijn,

2010; Frijda, Markam, Sato, & Wiers, 1995; Lewis, Haviland-Jones, & Barrett, 2010; Nabi, 2009). The main point here is, I believe, that researchers should always clarify how they define and operationalize the theoretical concepts under study, even if scholars don't agree, or rather, in particular if they don't agree on a single definition. The criteria according as to what counts as a "violent game," as well as what counts as a valid "measure of aggression" should be explicitly and specifically addressed in each study. A good approach to study such transient concepts might be, in my view, to not define them in an absolute way, but rather to study it in relative ways. That is, in addition to clarifying one's criteria for what is considered a violent game, in this case, specify how such violent games are compared to what are considered nonviolent games.

In many cases, and in particular when definitions are fuzzy, I believe that a relative approach would be more fruitful than an absolute one and provides a clear basis for comparison of various levels of implied meaning(s). If the comparison is relative in nature and games in one condition contain more violence than games in the other condition (evidenced by manipulation checks), a conservative test is then possible. In a similar line of thought, researchers may decide to assess the levels of violence from the participants' point of view. Perhaps, in addition to available content descriptors such as mature-content ratings (M-rated, R-rated, or the PEGI 18 + label), but rather from the game-players themselves, or from a comparison group of adults or adolescents. For example, if the target group is adolescents, an independent sample of adolescents should rate the games (or materials) in a pretest prior to the experiment proper. Importantly, the games selected in both conditions should also be equally appealing to the participants.

Chris: I agree with a lot of what you say. I think we have to be careful with how we communicate this to the public though. For instance, the effect sizes from meta-analyses haven't really changed from the "old school" games to the newer ones, somewhere in the $r = .15$ range. There's lots of arguments about what those numbers really mean of course, but for me what has my head scratching is whether we consider "violent video game" to mean Pac Man or Grand Theft Auto, the field seems to produce

the same results. For me, that's actually a matter of concern. I have to wonder to what extent that $r = .15$ reflects researcher expectancies rather than anything "really" happening in the real world.

So, I remain a bit worried that our use of the term "violent video game" perhaps particularly in the way we communicate to the general public, is rather sketchy. But what about aggression as an outcome, there have been a lot of controversies, I think less on what aggression is and more on how it is measured. Do you have any thoughts on that issue?

Elly: Measuring aggression is very difficult and should be discussed more openly, I believe; scholars should be much more explicit and detailed in how and why they chose their measures for aggression. Perhaps, measuring aggression is most problematic when measuring behavior. In a similar vein, the defining aspect of aggression as "intentional hurtful behavior" is not always clear from the chosen measurements, for example, when observing behavior in the playground. Another measure that has raised some questions is the so-called "noise blast"-procedure (a modified Taylor Competitive Reaction Time Test (TCRTT); Taylor, 1967) in which an ostensible partner receives blasts of white noise after failing a task on a computer (Carlson, Marcus-Newhall, & Miller, 1989; Konijn et al., 2007). Researchers using this noise blast should explicate how they controlled whether participants intentionally blast the other with loud noise (if they do) and whether participants are aware of inflicting potential harm on the other (in this case, the hearing damage they could cause). That is, if the blasting of noise is seen as in-game behavior, or if the participants believe the levels of noise are not at all damaging, are we then measuring aggressive behavior? Relatively simple solutions may reside in additional control procedures (Konijn et al., 2007), for example, including a pretest through which participants are told that applying higher levels of the noise blast could cause permanent hearing damage to their partner and let them experience beforehand how hurtful this is. Subsequently, participants may indicate how hurtful they find the various levels of the noise blast for themselves in a prior trial test. On reaching the higher levels, participants may then be told that these higher levels could cause permanent hearing damage to their part-

ner. To further increase believability of the study, participants might be told that their partner lives in a far-way city. The belief in the procedure might then also be tested in a follow-up interview after the experiment.

Chris: I see a lot of merit in your suggestions. One caveat though, is I still worry about demand characteristics in that kind of situation. Would someone, even a youth, really believe that you'd let them cause permanent hearing damage in a university laboratory. I have my doubts. I suspect there's still a lot of the old "Hawthorne Effect" in a lot of these studies (yours, mine, and everyone's) where what happens in the lab does not necessarily reflect real life.

Elly: Good point—we as researchers need to be aware of possible unintended side effects like the "Hawthorne Effect," social desirability, in-game behaviors, and the like. Therefore, the participants did not come to a university laboratory. We had them tested in our own room filled with game-computers, for which the school provided space independent from the other school activities. As far as my observations go, yes, they did believe causing permanent hearing damage as they proclaimed during the in-depth interview after the experiment in which we probed them on their video game interests. Regarding believability, please, also note that the pupils were not suspicious by playing games in school, as institutional environments like schools in The Netherlands seem more willing to allow such behavior in schools than in the U.S.A. Nevertheless, demand characteristics always is troublesome to exclude in the social sciences; as scientists we have to be aware of those risks continuously and do our utmost best to avoid or reduce such possible confounds and take precautions wherever necessary and possible.

Chris: But perhaps, more fundamentally, I worry about the lack of standardization and the potential for good faith Questionable Research Practices in such studies. For instance, it is very clear by this point that the "noise blast" measure has been used in an unstandardized way. Even some single authors use the noise—blast measure differently between studies (see Ferguson, 2013 for discussion). This is not good scientific practice, and is now known to have a clear impact on spurious effect sizes from individual studies (Elson and Ferguson, 2014). I think

what has been most disappointing is that, despite that these issues have been known for at least a decade, and despite calls to change this, and even the suggestion of a standardized version of the noise blast measure (Ferguson et al., 2008), the field has made little effort to reform and continues repeating the mistakes of the past.

Elly: Yes, I agree that the lack of standardization in our research practices is something media scholars should take much more seriously. However, this also is something that comes with the maturation of a field—and media psychology still is a rather young field (Dill, 2013). Nevertheless, yes, a potentially useful measurement device such as the “noise blast” should be used in a standardized way and mistakes of the past should be taken as lessons and avoided in future research. For example, only the first trial can be used. As you know, the “noise blast” consists of several trials of “who is fastest in hitting the green button” and “setting the level of noise/duration for the blast of (white) noise for the opponent.” Only the very first trial after some stimulus exposure can be used as being influenced by the preceding stimulus exposure. Clearly, each subsequent trial will be influenced by “tit-for-tat”—responding. Furthermore, the first level of the opponent’s response should be set to a neutral level, especially when subsequent trials are used for analysis. Some studies set that level to 10, inducing provocation, and then measured an average over all trials. Well, if the study aims to examine provocation, that’s fine, but this should be carefully explained. Even though I believe this induces a serious confound and should be avoided, if scholars chose to use a different version, they should report all of these details and clearly discuss the motivation for their choices. Well, in fact, such detailed descriptions are needed for any measurement procedure. This also requires a policy of journals to allow space to describe these details. As is, most journal editors accept just a minimum of methodological justification and researchers are facing the dilemma of being short either on methods, results, or on theory.

Chris: I think these are very good points. Although I’d suggested a standardized version based on all trials (Ferguson et al., 2008), I’d certainly be open to just using the first trial . . . if everybody agrees to use that as the standardized version. The problem is that the way peo-

ple use the noise blast measure is all over the place. Even some individual scholars use it differently between research studies. That, to me, falls within the realm of questionable research practices and certainly needs to stop, or explicitly justified the least. There may be some specific instances in which scholars are testing some unusual hypotheses that may require a different data extraction, but they should, as you say, explain why . . . and also whether the results differed using different methods so we can evaluate that more fully. After all, it is not only out of scientific concerns that we need to properly evaluate results from scientific scholarship, but also because media effects are often positioned as a potential concern for public health.

Media Effects and Public Health

Chris: As we have briefly discussed above, the way people respond to media can be very different . . . and probably none of it is particularly strong or indicative of a “public health” issue. Indeed, I think the field would do well to get out of the “public health” business . . . and if it did . . . it might actually be a much better science! I suppose this line of thinking is along the lines of differentiating between the old “hypodermic needle” models of media effects as opposed to the “limited effects” paradigm (Katz & Lazarsfeld, 1955). Do you see any merit to the field switching from a direct effects to a limited/idiosyncratic effects paradigm? Should we switch from social-cognitive theories to something like Uses and Gratifications or Self-Determination Theory?

Elly: Yes, I fully agree that time has come to stop talking about media effects in a general, unspecified way, and we need to move on to more idiosyncratic effects. With today’s technology any type of media content can be accessed at any time and the omnipresence of continuous media, interactions almost equates “media” with “society.” Hence, in my view, it does not make sense anymore to just measure how much time one spends watching TV, play games, or spend time on the Internet. In studying media processing and possible effects, it all depends on the type of content one is repeatedly exposed to in concordance with many other factors (Konijn et al., 2013). It all depends on individual processing of media content, which

might be driven by one's motivations for media use, but not necessarily. For example, if I would be motivated to relax by watching a funny movie and get to *Funny Games* (Haneke, 1997/2007), I might get gripped by the violence and aggression that gradually unfolds while I'm watching. The traces such an experience may eventually leave will then depend on all kinds of individual processing factors that may override my initial motivation. As another example, the motivation for the United States Army to develop the game *America's Army*, financed by the U.S. government, was for recruitment purposes and to train soldier's skills. Research shows that video games are very good training machines (Granic et al., 2014; Kühn et al., 2014; Okagaki & Frensch, 1994). Yet, the original motivations for media use may not always concur with the end result or may incite other outcomes in others, sometimes with other motivations. So, again, in my view video games can train both to the good and to the bad, including psychological consequences.

Therefore, yes, indeed, we should switch from hypodermic-needle theories to individual processing theories. Uses and Gratifications or Self-Determination Theory are helpful in understanding why some people prefer some type of media content over another, or at different times or circumstances, in a general sense. In my view, such theories are still too limited or generic to explain specific media effects; to do so, we need more psychologically oriented theorizing at the individual level. And here is where we apparently seem to differ most: I am convinced that media exposure may have an effect in individuals who are susceptible to it (i.e., depending on and in interaction with other factors). Therefore, I do not agree that media scholars should stay out of the "public health" business and I do not see why that might "actually be a much better science," as you state. The quality of science is defined by the quality of the scientists, whether related to public health or not. If any person, society, group, or public health may be at risk through his or her media use, we should relate to that and explain how this might occur and what we can do about it.

Chris: Indeed, that's an area on which we disagree. I mean, I certainly agree that if a public health issue did, in fact, exist, it would bear reporting. However, given the field's tendency to jump the gun, assume a public health

issue exists, and then selectively report research to support what are, in my opinion, the most alarmist positions possible, I do think we need to adopt a higher threshold for what constitutes evidence of a public health issue. Or perhaps we need to figure out a way to communicate effects in a way that don't necessarily leap directly from no effects to a public health crisis. Or perhaps we need to learn to be more open to communicating our uncertainty, or acknowledging that our opinions are not held by all scholars in our field . . . and that's ok.

Elly: Interesting, this also rings a bell regarding cultural differences . . . Positioning such research results into a "public health crisis" might be less of a European agenda as far as I am aware off, than an American one? If I understand you correctly, violent video games are broadly aired via a public health agenda in the United States and this is what you counter? While in Europe, specifically in the Netherlands, the general attitude is quite lenient toward violent gameplay, and it's mostly aired as kind of "just a game" and "common boys-toys". We don't have it as a public health agenda other than the PEGI-age and content ratings (cf. M-Rated). So, this may also explain that you stress the one-sidedness of information into one direction (i.e., countering violent video games as dangerous in the US), while I'm inclined to stress the one-sidedness into the other direction (i.e., countering violent video games as just a harmless boy-toy in the Dutch cultural context).

Cultural Differences in Views on Violence and Sex in the Media

Elly: Talking about cultural differences, a most puzzling issue is—to me—that it seems Americans, or American public health or politics for that matter, worry more about things like sex/nudity than violence in the media. This is truly where our worlds are quite separate I believe. Perhaps, this is only due to what one is used to . . . a matter of upbringing and culture? Indeed, we Europeans seem to care much less about nudity and sex, which is considered kind of a "natural thing" (and peaceful too: "better to kiss than to shoot"), while Europeans seem much more upset by guns, violence, and weapons. Apparently, you see and feel it the other way. I wonder how that came to be? How can you get upset by just seeing a nice (female/

male) body, or specific parts, and not by shooting someone? Isn't that the world upside down?

Chris: You are absolutely right about the differences in Americans/Europeans at least as I perceive them . . . we Americans get more upset about sex/nudity (we love it of course, but we like to pretend we don't), my German friends make fun of me all the time because of this (they expressed opinions more similar to yours that seem more tolerant and unconcerned about sex and nudity in cinema). For instance in my own family I don't worry about my son's exposure to violence (he's 11) because I'm confident it's not going to have an influence on his behavior in a substantive way . . . I know, even at his age, he's able to differentiate between what goes on in the fictional universe and the real one. Technically, I don't worry that a sex scene would "harm" him either or change his behavior, but of course in the United States it's not culturally appropriate to expose children to such material even in the context of, say, an R-rated movie, so even there my objection is a cultural/moral one rather than a "public health" concern.

Elly: One of my questions is why it is that Americans (or you yourself for that matter) do have problems with media exposure to nudity and erotic scenery? What is it that bothers you in this respect? This really intrigues me (as a European:-)).

Chris: In many respects the dichotomy Americans express regarding sex and violence in media is just a bizarre thing . . . really supports my belief we need to take a more sociological perspective on how social narratives can drive research (even American researchers take very seriously the notion that nudity or sexual media "harms" youth). Me, I don't think any of it is harmful. Why would a woman's breast or a man's buttocks cause my beliefs about morality, sex, women, and so forth, to change radically? Just to make sure you don't have the wrong impression . . . Americans LOVE sex and nudity . . . I think we also feel a lot of pressure to pretend we don't at the same time and complain publically about the very media we're consuming. As a culture we consume tons of porn, but if you got a room of 100 random Americans they quickly could get turned into a mob of antiporn sentiment . . . despite that a majority of the adults in the room would themselves be porn consumers at least on

occasion. So we feel cultural pressure to condemn sex and nudity even as we consume it in copious amounts (if anything we are much less apologetic about consuming violence than sex). So I think that's a great question . . . one people should explore more . . . are people really driven to condemn media because they think it is "harmful" . . . or because they believe they will enhance their own social reputation by doing so.

Elly: Yes, that is a good question you pose "are people really driven to condemn media because they think it is 'harmful' or because they believe they will enhance their own social reputation by doing so?" When it comes to sex, nudity, and porn, this seems a valid question and the latter may certainly play a role in terms of a fear to lower/lose the social esteem of their social group (family, friends, neighbors, professional colleagues). Or, if they wish to show how "free" and modern they are, they may think that allowing nudity on their screens may increase their social status. Perhaps it depends on whose esteem they most value? Still, in my view there may be more indirect or implicit influences.

Yet, your question becomes more difficult to answer when it concerns violence—perhaps especially because Americans seem to "love" violence more than sex (please, forgive the stereotyping here!!!). So, then, in your view, their reputation would be enhanced by showing violence as their "wall paper"? That is to say, for Americans perhaps it is easier to defend media violence than it is sex in the media?

Chris: That is pretty close to what the U.S. Supreme Court said in the *Brown v EMA* (2011) decision. There's no cultural tradition to restrict violent media (as opposed to pornography) and lacking a compelling reason to change that (and the court found no compelling evidence in the body of media research) it had no intention on infringing upon free speech. But this divergence between what we say we consume in media and what we actually consume in our private lives, I sometimes call "sanctimony bias" . . . that we may be biased to support positions that make us appear as morally upstanding citizens, particularly at the cost of "naughty" others, whether media industries or "bad" parents who let their children watch movies or play video games that are above their age category. And how does that sanctimony bias play into the (good faith) motivation of scholars? Does it play a role in the, in my view,

problematic policy statements by the American Psychological Association (2005) and American Academy of Pediatrics (2009), for instance? Did they feel the need to not inform the public about inconsistencies in the literature because it seemed the most politically viable position to be morally condemning of “naughty” media . . . and proclaim a “public health crisis” that, of course, psychologists and pediatricians would fix! For a few grant dollars of course!

Elly: Doesn't similar reasoning apply to stakeholders in the media and game industries? And, importantly, perhaps there may also be large cultural differences at stake here that may eventually affect how science is brought to the public at large? Would it be more common for American scholars to work from a more politically oriented agenda rather than from a more neutral position—that is to say to, for example, “justify the grant money” as opposed to “for the sake of scientific knowledge only”? Do you suggest perhaps that scholars in some nations must remain more observant than others to what politicians and the general public want scholars to find and say?

Chris: Well, society and parents in particular do have serious questions about media of course and I have nothing against science trying to answer society's or parents' questions. Yet, I do have a problem with scientists being selective in what they tell the granting institutions, society at large and parents. In our case, examples like “There's consistent research linking video games to aggression,” are misleading because the results are inconclusive and the debate is much more nuanced as we have been discussing here, in this article. And I do think much of this field has gone way past trying to provide objective information to parents and rather into trying to pressure, scare, and shame them into following a proscribed moral path. So I have no problem with the scholar who says, “There is some evidence to link media violence to aggression, there's also evidence to suggest media violence may be harmless. It's my personal opinion that, taken together . . . blah blah blah.” No worries there. But the scholar who says, “All the evidence supports my opinion, and there's no debate at all” is being dishonest (after all, here we are debating!) and that's what I think needs to change in the field. But I think you raise a really interesting question as well . . . do different nations/cultures differ in this respect? I think

that would be a great question for the type of sociological analyses of our field I'd like to see people take on in the future.

Parenting Children's Media Lives

Elly: You mentioned before that you have a child, an 11-year-old boy. Do you have a “media diet” for him or apply rules and regulations about his media use? How do you cope with the potential for general “overuse” of media by youth? And, how do you discuss possible restrictions with your child and motivate him to see their value?

Chris: Yes, I do have an 11-year-old who is like my best bud. We're actually a pretty easy-going family when it comes to media, but it's “informed leniency” . . . we like to know about a movie or game before we allow it. So, for instance, we've let our son watch some R-rated movies (Prometheus is one of his favorites) but we watched the movie first. I think people get a little hung upon the ratings categories, which can be useful guidelines, but not all “R” rated movies are the same, nor “M” rated video games. Because of our American cultural hesitancy regarding sexual themes, I'd be more hesitant about a game like “Grand Theft Auto 5” because of the sexual content than I would be about “Modern Warfare 3” even though both are rated M. Even there though, for me, it's more about morality than “harm” . . . I don't think GTA5 would change my son's attitudes toward women or make him hostile, but I just don't feel that a game like GTA5 represents our family's values. My son and I play video games together a lot too (indeed, I rarely play video games on my own anymore), and we watch most movies together so I'm very involved in my son's media life. For me, even where objectionable material comes up, it gives us the opportunity to discuss it which, frankly, I think gives him a leg up on kids who have been “shielded.” So, for example, I don't worry at all about my son hearing strong language. We've been to movies with s-bombs and f-bombs and that just led us to have a discussion about the meaning of those words, how they can be hurtful or inappropriate, and how they are not be used at home or at school. I've yet to get a single complaint about him using harsh language at school, and he doesn't use that language at home.

Elly: You mention a key factor here, I believe: “informed leniency” . . . we like to know about a movie or game before we allow it. Surely, this will make your son a smart boy, media savvy in terms of how to cope with all the weird stuff he encounters in media fare.

I think that a key aspect in how you teach your son is discussing all materials that you find objectionable. Indeed, as you say, it gives you the opportunity to discuss it and, for example, have a discussion about the meanings of what you see and hear and how those words can be hurtful or inappropriate, and how they are not to be used at home or at school. Do you think all parents act like that? Or have the capabilities to do so? Or, even the time to guard their kids in such an informed way?

One of the critical factors in our studies appears to be “educational ability level”—those at lower levels are more at risk (Nije Bijvank, Konijn, & Bushman, 2012), or put differently, it is more likely that such kids will be affected by certain media exposure in undesired ways. Can we expect all parents, even those with many kids, heavy duties, demanding family or job circumstances, and perhaps less educational ability themselves, to inspect all their children’s media use and have such informative discussions with them? If so, would they know how to do this, what information is relevant and what is not, and discuss such that it will not backfire? Aren’t most people not in such a privileged position as many of us—media scholars—are?

Chris: I think you make an excellent point about the differing ability levels of various parents. I’m a licensed clinical psychologist and I used to do a lot of assessments on parents who were trying to get custody of their kids back from the state after they had neglected/abused them so you don’t have to convince me that some kids would be better off being raised by a pack of racoons than their natural parents. But here I think the issue is with the parents, not with media. If a parent lacks the resources to be involved in their kids’ media lives, I suspect that is probably symptomatic of other issues that may negatively influence the child far and above anything the media will do. So in that case it could be symptomatic of a larger issue, but again I don’t see the media really as a cause of anything. When I talk to community groups about this kind of thing (I always encourage parents to be more involved . . . play games with

your kids, etc.), mainly the negative responses I get are more along the lines of “but I’m not good at playing games” or “but I think they’re stupid” not so much “but I’m already overwhelmed with 2 jobs,” and so forth. Granted, the sorts of folks who come hear a psychologist yap about video games are probably not the folks who are economically stressed, but I think a lot of the issue for me fits well with Andrew Przybylski’s (2014) work . . . there’s this kind of generational divide, and a lot of older parents and grandparents just look at video games like a kind of alien monster they don’t understand. A lot of my previous work was with relatively low SES families though, given that whole region was poor, and media exposure for them rarely popped out as a significant issue.

What about you and your family . . . what kinds of approaches do you employ with your children? And how do your children respond to restrictions?

Elly: We have teenage girls who are not interested in violent games, but still, in respect to media we are restrictive: R-rated is R-rated (with us: 18+). Perhaps, also because our society, and Amsterdam especially, is already quite lenient on its own. So, we sometimes feel we have to be more restrictive than our environment. Yeah, cultural differences seem to play a role here as well and perhaps also, as we discussed before, that some parents may feel the need to “show how modern and free” they are by not restricting their kids’ media use? Well, our motto is like: “They have a whole life ahead to explore deviant behaviors when their mindset is, likely, more ready to process the content and implications appropriately.”

When I consider my girls, it seems so clear to me they take those TV models as role models. No, not literally, in much more subtle ways—they mirror, reflect, idealize, criticize, and relate the ‘screen lives’ to their own lives now and in the future, to their behaviors, circumstances and, especially, to their own achievements and, at times, their looks. Yes, I can see media has an influence on “us,” children and adolescents in particular. However, I also believe that we are just at the beginnings of unraveling how media precisely has influence—media research still “stands in children’s shoes”—a Dutch saying for “is still in its infancy.” And, we, media scholars have to figure out how to best study

and how to unravel the complexities and underlying mechanisms in the big puzzle.

Chris: I guess too we both look for evidence in our own lives . . . my son and I watch “violent” movies all the time, whether all the PG-13 superhero movies or the occasional Prometheus and he’s the most passive, agreeable kid. I think that, in the end, this is probably what parents should be doing. Each parent has to decide what works for their family and what works for their child. There is no “one size fits all” approach and the more media scholars, psychologists, pediatricians try to enforce such an approach (as in policy statements), the more trouble they will ultimately be in, I think.

Elly: I understand, yet, I also think we have to go beyond the level of individual parenting. For example, parents often complain about their sons playing violent games all the time, too many hours a day, or through the night. How can parents know whether this may affect their child, in the end, or what to do? We cannot expect each individual parent to study the mixed research outcomes all by themselves. Therefore, I believe we should strive to provide a basis for parents to decide what may work for their family and for their children—even if there is no “one size fits all.” Media scholars should inform the public on the results of their research and how media may or may not affect some individuals, and provide more nuanced information on the many factors that may play a role. Also, the information to the public should be open on where research findings are indecisive and what limitations were faced. For example, when I was a kid, parents smoked anywhere and everywhere, even in the classroom and when pregnant. Only when I was a smoking adolescent, news came through that smoking might not be good for you, however, in those days, results were inconsistent and sometimes research passed by that was, in our view, hilarious. I am not trying to compare medical research with media research, which can be a fallacy as you have already addressed in the foregoing, but rather, I want to point out the importance of presenting both sides to the public. Because even when results are limited and inconclusive, it is important that people can make up their own minds. To get both sides of the available research results and have the inconsistencies openly discussed provides the very basis for “informed leniency.” Therefore, I believe that

“informed leniency” should be created on a much larger scale than just within an individual family, for example through media education, via schools, and public debate. Only when people are well-informed they can make up their own mind and take responsibility for their own choices; smokers and nonsmokers, gamers and nongamers, and researchers pro and contra can then peacefully coexist.

Conclusion

From our discussion, we clearly agreed on more issues than we had expected beforehand, while we also clearly still disagree on substantial other things. For us, discussing these issues was illustrative in understanding how other scholars can approach the same data and same questions and come to very different conclusions. Sometimes being able to talk about these things as colleagues, rather than merely reading manuscripts, can help us to understand the perspectives of others, particularly when we are open to them. We took a year to very carefully explore each other’s opinions via our Q&A procedure (see intro) through email. The dialogue in the current paper is an authentic, yet condensed version of our very lengthy exchange, very close to the original. Now, neither of us may necessarily have changed our minds about whether video games or other media have substantial impact on our lives. But the crucial thing for us is that we are able to respect our differing opinions and leave the conversation, not agreeing perhaps, yet still friendly.

We believe that this element . . . open and nonjudgmental discussion and presenting both sides of the story, is something that occurs too little, and is sometimes lacking, in video game research and throughout much of media effects research. It often occurs that scholars, being human, divide into “camps” or engage in group-think. The well-studied phenomenon of selective exposure (Knobloch-Westerwick, 2014) may also hold to media scholars themselves and it’s in human nature to tend to judge those who are in favor of your opinion, or who come with similar research findings, more convincing than others. Obviously, such instances occur on both sides of media debates and also apply to scholars who view themselves as “middle ground,” viewing the “middle ground” as inherently more valuable than either pole. Yet, to the ex-

tent that scholars attempt to enforce their own view as most reasonable, neglect alternate views, and limit themselves to a one-sided perspective, they may be prone to this phenomenon. Even though most studies are not perfect and have limitations, apply different methodologies, and results are not consistent in either direction, differences of opinion count and should be acknowledged to further improve our understanding and do better research.

We hope that with our conversation, we have demonstrated how a scholarly discussion on an issue as polarizing as video game violence and among scholars who basically disagree, may look like, and yet part cordially and with respect for alternate positions. We learned a lot and enjoyed having this conversation. While the result is far more casual than a typical journal article, we hope readers will learn a lot too and appreciate the insights we tried to bring from both sides. We believe that the field will benefit a lot from a more nuanced view on what effects video games can and cannot have, and more precisely how and why they may affect some but not others, and sometimes but not always, both to the good and to the bad.

Finally, several important issues for future research crossed our discussion that we wish to bring to the fore in concluding our article. While we discussed the issue of causality and evaluating media effects research thus far, we found agreement regarding the future of media research in terms of moving away from a direct effects approach to a more idiosyncratic paradigm. We agreed that given today's highly sophisticated technology through which any type of media content can be accessed at any time, we need to study media use, processing, and effects in a more specified and dynamic way. Furthermore, we proposed to complement current media research with more sociological perspectives, addressing questions pertaining to media use and effects in different nations and across cultures. Likewise, an interesting question relates to the extent to which people might be driven in their opinions on media effects by how they think (violent/sexual/adverse) media might be "harmful" or because it may enhance their social reputation by condemning/allowing such media. Related questions refer to how cultural and moral concerns balance with concerns for public health. Also, we believe it would be worth examining how differences in policies to

acquire grant money for research in different nations may affect the debate on public health issues. More research is also needed into indirect and subtle ways through which media may or may not influence individuals or society at large. In unraveling the complexities and underlying mechanisms in the big puzzle, we believe media research is still in its infancy. Finally, it is important to inform the public on the many sides of the same coin and support "informed leniency."

References

- Adachi, P. C., & Willoughby, T. (2011). The effect of video game competition and violence on aggressive behavior: Which characteristic has the greatest influence? *Psychology of Violence, 1*, 259–274. <http://dx.doi.org/10.1037/a0024908>
- American Academy of Pediatrics. (2009). Media violence policy statement. *Pediatrics, 124*, 1495–1503. <http://dx.doi.org/10.1542/peds.2009-2146>
- American Cancer Society. (2014). Tobacco-related cancers fact sheet. Retrieved from: <http://www.cancer.org/cancer/cancercauses/tobaccocancer/tobacco-related-cancer-fact-sheet>
- American Psychological Association. (2005). Resolution on violence in video games and interactive media. Retrieved from: <http://www.apa.org/about/governance/council/policy/interactive-media.pdf> Retrieved July 3, 2012.
- Anderson, C. A., & Ford, C. M. (1986). Affect of the game player: Short term effects of highly and mildly aggressive video games. *Personality and Social Psychology Bulletin, 12*, 390–402. <http://dx.doi.org/10.1177/0146167286124002>
- Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., . . . Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in eastern and western countries: A meta-analytic review. *Psychological Bulletin, 136*, 151–173. <http://dx.doi.org/10.1037/a0018251>
- Australian Government, Attorney General's Department. (2010). *Literature review on the impact of playing violent video games on aggression*. Commonwealth of Australia.
- Bartholow, B. D., Bushman, B. J., & Sestir, M. A. (2006). Chronic violent video game exposure and desensitization to violence: Behavioral and event-related brain potential data. *Journal of Experimental Social Psychology, 42*, 532–539. <http://dx.doi.org/10.1016/j.jesp.2005.08.006>
- Boot, W. R., Blakely, D. P., & Simons, D. J. (2011). Do action video games improve perception and cognition? *Frontiers in Psychology, 2*, 226. <http://dx.doi.org/10.3389/fpsyg.2011.00226>

- Breuer, J., Vogelgesang, J., Quandt, T., & Festl, R. (in press). Violent video games and physical aggression: Evidence for a selection effect among adolescents. *Psychology of Popular Media Culture*.
- Brown v. E. M. A. (2011). Retrieved from: <http://www.supremecourt.gov/opinions/10pdf/08-1448.pdf> Retrieved July 1, 2011.
- Carlson, M., Marcus-Newhall, A., & Miller, N. (1989). Evidence for a general construct of aggression. *Personality and Social Psychology Bulletin*, *15*, 377–389. <http://dx.doi.org/10.1177/0146167289153008>
- Cooper, J., & Mackie, D. (1986). Video games and aggression in children. *Journal of Applied Social Psychology*, *16*, 726–744. <http://dx.doi.org/10.1111/j.1559-1816.1986.tb01755.x>
- Dill, K. (Ed.). (2013). *The oxford handbook of media psychology* (pp. 186–211). New York, London: New York, NY: Oxford University Press.
- Döveling, K. Von Scheve, Chr., & Konijn, E. A., (Eds.) (2010). *The Routledge handbook of emotions and mass media*. New York, NY: Routledge.
- Elson, M., & Ferguson, C. J. (2014). Does doing media violence research make one aggressive? The ideological rigidity of social cognitive theories of media violence and response to Bushman and Huesmann (2013), Krahé (2013), and Warburton (2013). *European Psychologist*, *19*, 68–75. <http://dx.doi.org/10.1027/1016-9040/a000185>
- Ferguson, C. J. (2013). Violent video games and the Supreme Court: Lessons for the scientific community in the wake of *Brown v. Entertainment Merchants Association*. *American Psychologist*, *68*, 57–74. <http://dx.doi.org/10.1037/a0030597>
- Ferguson, C. J., & Kilburn, J. (2009). The public health risks of media violence: A meta-analytic review. *The Journal of Pediatrics*, *154*, 759–763. <http://dx.doi.org/10.1016/j.jpeds.2008.11.033>
- Ferguson, C. J., & Kilburn, J. (2010). Much ado about nothing: The misestimation and overinterpretation of violent video game effects in eastern and western nations: Comment on Anderson et al. (2010). *Psychological Bulletin*, *136*, 174–178. <http://dx.doi.org/10.1037/a0018566>
- Ferguson, C. J., Rueda, S., Cruz, A., Ferguson, D., Fritz, S., & Smith, S. (2008). Violent video games and aggression: Causal relationship or byproduct of family violence and intrinsic violence motivation? *Criminal Justice and Behavior*, *35*, 311–332. <http://dx.doi.org/10.1177/0093854807311719>
- Frijda, N. H., Markam, S., Sato, K., & Wiers, R. (1995). Emotion and emotion words. In J. A. Russell (Ed.), *Everyday conceptions of emotion* (pp. 121–143). Dordrecht, the Netherlands: Kluwer Academic. http://dx.doi.org/10.1007/978-94-015-8484-5_7
- Gentile, D. A., Lynch, P. J., Linder, J. R., & Walsh, D. A. (2004). The effects of violent video game habits on adolescent hostility, aggressive behaviors, and school performance. *Journal of Adolescence*, *27*, 5–22. <http://dx.doi.org/10.1016/j.adolescence.2003.10.002>
- Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist*, *69*, 66–78. <http://dx.doi.org/10.1037/a0034857>
- Graybill, D., Strawniak, M., Hunter, T., & O’Leary, M. (1987). Effects of playing versus observing violent versus nonviolent video games on children’s aggression. *Psychology: A Quarterly Journal of Human Behavior*, *24*, 1–8.
- Haneke, M. (1997/2007). *Funny Games*. Austria; in 2007 a remake was shot in the USA. Retrieved from: [http://en.wikipedia.org/wiki/Funny_Games_\(1997_film\)](http://en.wikipedia.org/wiki/Funny_Games_(1997_film)) Retrieved February 12, 2014.
- Huesmann, L. R., Moise-Titus, J., Podolski, C. L., & Eron, L. D. (2003). Longitudinal relations between children’s exposure to TV violence and their aggressive and violent behavior in young adulthood: 1977–1992. *Developmental Psychology*, *39*, 201–221. <http://dx.doi.org/10.1037/0012-1649.39.2.201>
- Ioannidis, J. P. (2012). Scientific inbreeding and same-team replication: Type D personality as an example. *Journal of Psychosomatic Research*, *73*, 408–410. <http://dx.doi.org/10.1016/j.jpsychores.2012.09.014>
- Kato, P. M., Cole, S. W., Bradlyn, A. S., & Pollock, B. H. (2008). A video game improves behavioral outcomes in adolescents and young adults with cancer: A randomized trial. *Pediatrics*, *122*, e305–e317. <http://dx.doi.org/10.1542/peds.2007-3134>
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal influence: The part played by people in the flow of mass communications*. New York, NY: Free Press.
- Knobloch-Westerwick, S. (2014). *Choice and preference in media use: Advances in selective exposure theory*. New York, NY: Routledge, Taylor & Francis.
- Konijn, E. A., Bijvank, M. N., & Bushman, B. J. (2007). I wish I were a warrior: The role of wishful identification in the effects of violent video games on aggression in adolescent boys. *Developmental Psychology*, *43*, 1038–1044. <http://dx.doi.org/10.1037/0012-1649.43.4.1038>
- Konijn, E. A., Veldhuis, J., & Plaisier, X. S. (2013). YouTube as a research tool: Three approaches. *Cyberpsychology, Behavior, and Social Networking*, *16*, 695–701. <http://dx.doi.org/10.1089/cyber.2012.0357>
- Krahé, B. (2014). Media violence use as a risk factor for aggressive behaviour in adolescence. *European*

- Review of Social Psychology*, 25, 71–106. <http://dx.doi.org/10.1080/10463283.2014.923177>
- Kühn, S., Gleich, T., Lorenz, R. C., Lindenberger, U., & Gallinat, J. (2014). Playing Super Mario induces structural brain plasticity: Gray matter changes resulting from training with a commercial video game. *Molecular Psychiatry*, 19, 265–271. <http://dx.doi.org/10.1038/mp.2013.120>
- Lewis, M., Haviland-Jones, J. M., & Barrett, L. F. (Eds.). (2010). *Handbook of emotions* (3rd ed.). New York, London: The New York, NY: Guilford Press.
- Nabi, R. L. (2009). Emotion and media effects. In R. L. Nabi & M. B. Oliver (Eds.), *The SAGE handbook of media processes and effects* (pp. 205–222). Thousand Oaks, CA, USA/ London, UK: SAGE.
- Nije Bijvank, M., Konijn, E. A., & Bushman, B. J. (2012). “We don’t need no education”: Video game preferences, video game motivations, and aggressiveness among adolescent boys of different educational ability levels. *Journal of Adolescence*, 35, 153–162. <http://dx.doi.org/10.1016/j.adolescence.2011.04.001>
- Okagaki, L., & Frensch, P. A. (1994). Effects of video game playing on measures of spatial performance: Gender effects in late adolescence. *Journal of Applied Developmental Psychology*, 15, 33–58. [http://dx.doi.org/10.1016/0193-3973\(94\)90005-1](http://dx.doi.org/10.1016/0193-3973(94)90005-1)
- Przybylski, A. K. (2014). Who believes electronic games cause real world aggression? *Cyberpsychology, Behavior, And Social Networking*, 17, 228–234. <http://dx.doi.org/10.1089/cyber.2013.0245>
- Przybylski, A. K., Deci, E. L., Rigby, C. S., & Ryan, R. M. (2014). Competence-impeding electronic games and players’ aggressive feelings, thoughts, and behaviors. *Journal of Personality and Social Psychology*, 106, 441–457. <http://dx.doi.org/10.1037/a0034820>
- Rushton, B. (2013). Backdooring it: Defense maneuvers around setback. Illinois Times. Retrieved from: <http://www.illinoistimes.com/Springfield/article-11440-backdooring-it.html> Retrieved August 20, 2013.
- Taylor, S. P. (1967). Aggressive behavior and physiological arousal as a function of provocation and the tendency to inhibit aggression. *Journal of Personality*, 35, 297–310. <http://dx.doi.org/10.1111/j.1467-6494.1967.tb01430.x>
- von Salisch, M., Vogelgesang, J., Kristen, A., & Oppl, C. (2011). Preference for violent electronic games and aggressive behavior among children: The beginning of the downward spiral? *Media Psychology*, 14, 233–258. <http://dx.doi.org/10.1080/15213269.2011.596468>

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