Reflective thoughts about violent media content – development of a bilingual self-report scale in English and German

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ABSTRACT

This study investigates audiences' reflective thoughts about violent media content with the aim of developing a bilingual self-report scale in English and German. Scale development was based on an item pool of statements derived from previous qualitative interviews about individuals' reflection and meaning-making of violent media content. Two survey samples from the US (N = 431) and Germany (N = 412) rated their agreement with these statements, with an example of violent fiction, violent nonfiction, or the most recent violent content they had seen in mind. Factor analysis of the data revealed five main dimensions including reflective thoughts about: (1) human cruelty and suffering from violence, (2) own or close others' experiences with violence, (3) moral complexities of violence, (4) the true story behind violent content, and (5) strategies learned for dealing with violence in real life. Scale items selected to represent these five dimensions showed convergent validity with eudaimonic media experiences and perceived realism as well as comparable measurement properties across the two countries (US and Germany). Results are discussed with regard to the role of reflective thoughts as potential buffer against negative effects of exposure to media violence.

What goes on in the minds of people who use violent media content? Media violence research has mainly focused on potential harmful effects such as aggressive thoughts and action tendencies elicited by violent portrayals (e.g., Anderson et al., 2010; Bushman & Huesmann, 2006). In addition, cultivation research suggests that frequent exposure to violent content can cultivate a "mean world syndrome" characterized by fear of victimization and distrust toward other people (Gerbner & Gross, 1976). This research focus on fear- and aggression-related effects is understandable in light of social concerns that the prevalence of violent content in the media could undermine

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important aspects of the social fabric such as empathy, trust, and social norms against the use of violence.

However, as several authors have argued (e.g., Livingstone, 2007; Olson, 2010; Oswald, Prorock, & Murphy, 2014; Quandt et al., 2015), the violence-aggression debate falls short of capturing the whole complexity of audience responses to violent media content. An emerging line of qualitative and quantitative research (Bartsch et al., 2016; Bartsch & Mares, 2014; Schlesinger, Dobash, Dobash, & Weaver, 1992; Shaw, 2004) suggests that some types of violent portrayals may be used as an opportunity for reflection and meaning-making about violence as a fact of social reality. For example, audiences may appreciate watching even stressful, gory films (e.g., about war, violent crime, or domestic abuse) if such films provide a serious and insightful reflection of reality that fully acknowledges the human cost and moral complexity of violence rather than glossing over or glorifying it.

This serious and contemplative side of audience responses to violent media content has remained under-researched so far. General research on eudaimonic, truth-seeking motivations for media use (Oliver & Raney, 2011; Oliver et al., 2018) has linked audiences' reflective processing of media content to a variety of prosocial outcomes. For example, moving and thought-provoking media experiences can stimulate issue interest and information seeking about social and political issues (Bartsch & Schneider, 2014; Oliver, Dillard, Bae, & Tamul, 2012), and can prompt changes in attitudes and behavioral intentions toward stigmatized groups (Bartsch, Oliver, Nitsch, & Scherr, 2018; Oliver, Hartmann, & Woolley, 2012). Such prosocial responses could act as buffers against negative effects of media violence and might help explain individuals' differential susceptibility to negative effects (Slater, Henry, Swaim, & Cardador, 2004; Valkenburg & Peter, 2013). Other types of reflective rumination such as moral disengagement (Shafer & Raney, 2012), by contrast, might reinforce aggressive thoughts and action tendencies. Therefore, it seems important to gain a deeper understanding of the thought content associated with violent media portrayals.

This study aims to broaden the focus of media violence research on negative, fear- and aggression-related effects by providing evidence of and measurement for thought-provoking effects. Building on findings from previous qualitative work (Bartsch et al., 2016; Schlesinger et al., 1992; Shaw, 2004), we developed and validated a multidimensional self-report scale to assess the most common types of reflective thoughts about violent media content. Scale development studies were conducted bilingually in English and German, allowing us to validate our selection of scale items by comparing measurement properties across different countries (the US and Germany). Further, we examined convergent validity of the newly developed scales with eudaimonic media experiences and perceived realism.

Think twice: implicit learning and cognitive reappraisal of violent media content

This study is one in a long line of research on audiences' cognitive processing of violent media content. What is relatively new, though, is our research focus on active and reflective forms of information processing. For the most part, media violence research has been concerned with implicit association learning and priming processes as described by the general aggression model (GAM, Anderson & Bushman, 2002), or cultivation theory (Shrum, 2009), for example. What these theoretical frameworks share in common is their focus on the formation of implicit knowledge structures such as aggressive (or anxious) schemata and scripts that can be stored and activated outside conscious awareness, and can guide perception and behavior without conscious intention. The problematic outcomes of such implicit association learning from violent portrayals, including aggressively (or anxiously) biased attitudes, perceptions, feelings, and action tendencies (Anderson & Bushman, 2002; Gerbner & Gross, 1976), are an obvious matter of public and scientific concern.

The magnitude and consistency of aggression and cultivation effects are a matter of ongoing controversy, however. In the case of cultivation research, effects are generally small and context-dependent (Potter, 2014). In the case of media effects on human aggression, positions range from moderate-sized effects (e.g., Anderson et al., 2010), to a contingent mix of stronger and weaker effects (e.g., Slater et al., 2004), to small or insignificant effects (e.g., Ferguson & Kilburn, 2009; Ferguson, San Miguel, & Hartley, 2009). To advance the current state of debate, several authors (e.g., Livingstone, 2007; Olson, 2010; Quandt et al., 2015; Slater et al., 2004; Valkenburg & Peter, 2013) have called for a more complex understanding of experiencing media violence that acknowledges the potential of violent portrayals for both harmful and beneficial effects, and that takes into account the personal, social and situational factors that lead individuals to respond differently to the same media content.

We propose that the reflective side of violence processing is one of the key elements of the complex picture that have remained underresearched so far. On a theoretical level, the role of reflective processing as corrective mechanism is part of the GAM, specifically in the form of *reappraisal*. According to the GAM (Anderson & Bushman, 2002), when aggressive schemata and scripts are activated in real life and are about to sway individuals' decision making and behavior, reappraisal can lead individuals to question their impulsive action tendencies and to consider alternative courses of thoughtful action.

The theoretical idea we propose as a complement to the GAM is to extend the role of reappraisal in real-life situations to situations of media use. Processes of reflection and reappraisal during media use might seem inconsequential at first, because impulsive action is rather unlikely to occur at the time of media exposure. However – just as aggressive schemata and scripts can be stored in memory, and

can guide impulsive action later on – reflective processes of meaning-making and reappraisal could be rehearsed during exposure to violent media content. As a result of such rehearsal processes, reappraisal and meaning-making could then become more accessible in real-life situations, when they are needed as corrective

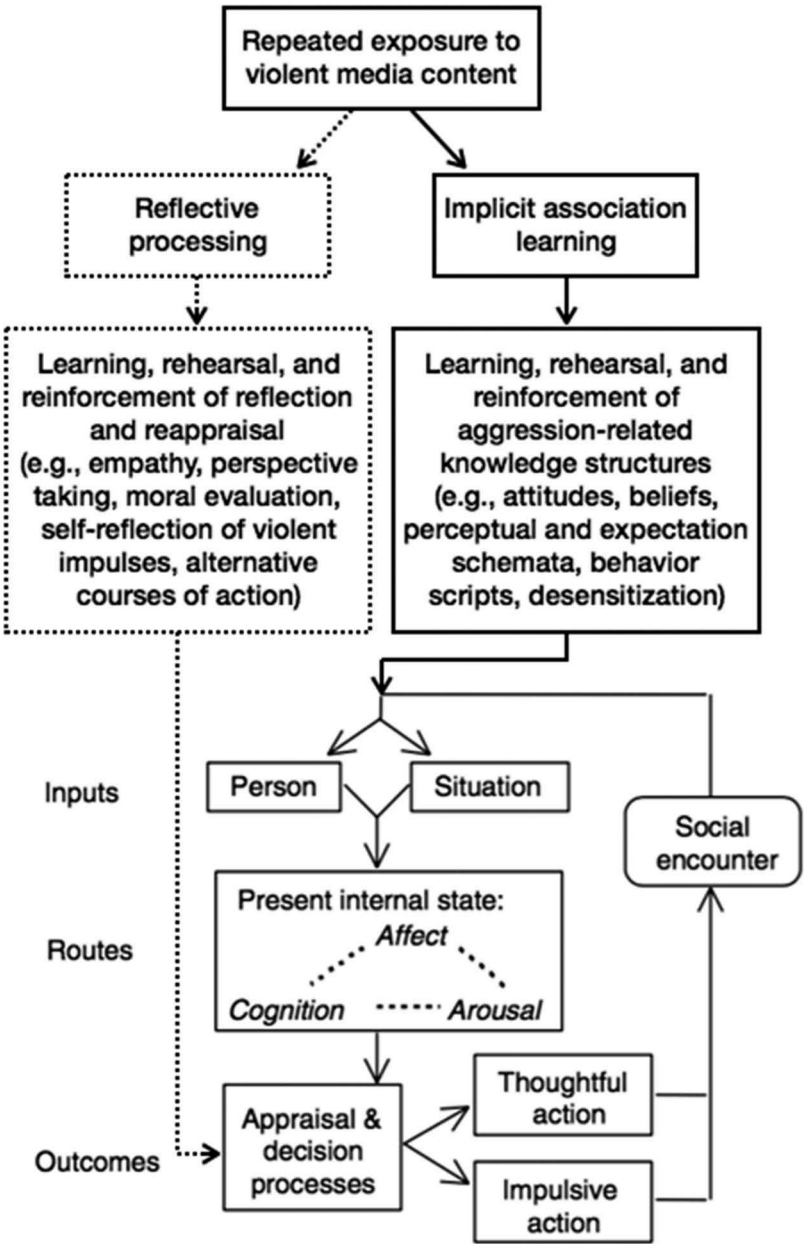

Figure 1. Theoretical extension of the general aggression model with regard to reflective processing of violent media content.

Note: The lower part of the figure is based on Anderson and Bushman's (2002) representation of the general aggression model in Figure 2 (p. 34).

mechanism to promote thoughtful action. Figure 1 illustrates how we propose that repeated experiences of cognitive reappraisal and meaning-making from violent media content might factor into the GAM.

Such an extended version of the GAM not only allows for potential positive effects of self-reflection, moral reasoning or empathy induced by certain types of violent portrayals; it can also help explain and specify the conditions under which an individual would or would not be more likely to aggress after exposure to violent media content. It is important to note, however, that not all forms of reflective reappraisal and thoughtful action are necessarily nonaggressive. Reflective processing might lead some individuals to conclude that aggression is morally justified in certain situations, or that certain persons are unworthy of empathy. These kinds of reflective thought processes that justify violence and aggression have been discussed under the heading of moral disengagement (Shafer & Raney, 2012; Tsay-Vogel & Krakowiak, 2016) and need to be kept in mind to avoid overgeneralized optimism about the peaceful nature of reflective thoughts. Nevertheless, it seems reasonable to assume, as proposed by the GAM, that in many cases reflective reappraisal can open an opportunity for alternative, nonviolent courses of action.

Comprehensive operationalization of these theoretical ideas concerning the role of reflective thoughts in individuals' processing of violent media content requires multiple steps, including the operationalization of: (1) content features and personal dispositions that motivate reflective thought processes of meaning-making and reappraisal among audiences of violent media content, (2) the thought content of such reflective processes, (3) their attitudinal and behavioral outcomes, and finally (4) their potential effects as buffers against (or reinforcers of) problematic outcomes from implicit learning of aggressive or anxious schemata and scripts. As reviewed in the following section, an emerging line of research (e.g., Bartsch & Mares, 2014) has begun to operationalize the first step (motivational factors that stimulate reflective thoughts) based on theories of eudaimonic motivations for media use (Oliver & Raney, 2011). The focus of the present research is on step two (operationalization of reflective thought content), which has been addressed in several qualitative studies (e.g., Bartsch et al., 2016; Schlesinger et al., 1992; Shaw, 2004). To our knowledge, however, no quantitative measure of reflective thoughts about violent media content is available so far. Bridging this methodological gap is important to integrate research on audiences' meaningful, eudaimonic responses to violent media content with research on problematic outcomes – which is necessary to address steps three and four (operationalization of potential positive outcomes or buffer effects).

We caution the reader against expecting that all four steps will be resolved within this paper. Yet we believe that the present scale development project will facilitate research into the potential moderating influence of reappraisal and meaning-making on aggression and cultivation effects of violent portrayals. If we know about individuals' reflective thoughts while using violent media content,

then we might be in a better position to predict who will act on aggressive (or anxious) schemata and scripts they have learned from the media, and who will not. Below we review the theoretical and empirical evidence that informed our measurement approach.

Eudaimonic appreciation – what motivates reflective processing of violent content?

The concept of eudaimonic motivations for media consumption was introduced by Oliver and Raney (2011) as a complement to hedonic approaches that focus on audiences' mood regulation through pleasant and exciting media choices. Most of the classical approaches in entertainment research have focused on the principle of hedonic affect regulation – as reflected for instance in models of mood management (Zillmann, 1988), sensation seeking (Zuckerman, 1979), excitation transfer (Zillmann, 1996), and affective disposition (Zillman & Cantor, 1977). Collectively, this line of research suggests that violent media content is used for the thrill and excitement it affords.

At the same time, however, a growing body of research and theorizing has dealt with "paradoxical" entertainment phenomena such as exposure to sad or painful content like cruel anti-war movies (e.g., *Apocalypse Now*) or anti-war games (e.g., *This War of Mine*) that are not readily explained in terms of hedonistic, feelgood motivations. The eudaimonic approach explains how counter-hedonic media experiences can, despite their negative or mixed affective valence, contribute to viewers' sense of meaningfulness and gratification. This line of research suggests that audiences are attracted to serious, or even painful content, if such content is perceived to offer important insights about some aspect of the human condition (Bartsch & Schneider, 2014; Lewis, Tamborini, & Weber, 2014; Oliver & Raney, 2011; Wirth, Hofer, & Schramm, 2012). Oliver and Raney (2011) conceptualized individuals' attractions to thought-provoking media content as a form of eudaimonic motivation, whereby viewers "search for and ponder life's meanings, truths, and purposes" (p. 985). Their eudaimonic framework builds on social psychological research on eudaimonic well-being (Ryff & Singer, 2008; Waterman, 1993) which suggests that individuals' ability to make sense of negative experiences constitutes an important prerequisite for emotional stability, psychological well-being, and personal growth. Hence it seems plausible to assume that negative media content – including some types of violent portrayals – can be used by audiences as an opportunity to confront and make sense of painful insights and experiences (Bartsch & Hartmann, 2017).

The distinction between hedonic and eudaimonic motivations for media consumption has been linked to qualitatively different types of media experiences that arise from the satisfaction of these needs. Hedonically rewarding experiences (such as amusement, thrill, and suspense) that are characterized by positive valence and pleasant arousal are usually subsumed under the

concept of "enjoyment," whereas the experience of meaning-related, eudaimonic gratification has been conceptualized as "appreciation." Oliver and Bartsch (2010) described the defining characteristics of eudaimonic appreciation as: "an experiential state that is characterized by the perception of deeper meaning, the feeling of being moved, and the motivation to elaborate on thoughts and feelings inspired by the experience" (p. 76).

An emerging line of theoretical reasoning has argued that violent portrayals too can be appreciated by audiences, including violent movies (Bartsch & Mares, 2014), and violent video games (Elson, Breuer, Ivory, & Quandt, 2014). Still, empirical evidence about eudaimonic responses to media violence in particular is relatively scarce. Some studies on eudaimonic meaning-making (e.g., Bartsch, Kalch, & Oliver, 2014; Bartsch & Schneider, 2014; Oliver et al., 2015) included stimuli with violent content but did not use specific measures of violence-related thoughts.

The most direct evidence, to our knowledge, comes from a study by Bartsch and Mares (2014) on individuals' eudaimonic motivations for viewing violent and gory portrayals. Specifically, Bartsch and Mares (2014) found an interaction between individuals' perception of gore and meaningfulness in film trailers, such that film viewers seemed to override their aversion to scenes of graphic gore, if they anticipated that the depiction of violence will occasion eudaimonic, meaning-making responses. In that study, the measurement of eudaimonic appreciation was based on a scale of Oliver and Bartsch (2010) asking participants how "meaningful," "moving," and "thought-provoking" they found the content to be. This measurement approach is consistent with the general concept and operationalization of eudaimonic appreciation but gives no insight into the specific thought content associated with violent portrayals. As noted by Bartsch and Mares (2014, p. 971), "several crucial questions […] remain unaddressed by this study. What did people mean when they rated their expectation that the portrayal of violence in a given movie would be meaningful, moving, and thought-provoking? What sorts of thoughts did they anticipate having, and what was it about the trailers that connoted meaningfulness?" The present study aims to address these open questions by drawing on insights from previous qualitative work on individuals' meaning-making from violent media content.

Reflective thoughts about violent content – the evidence from qualitative research

Reflective thought processes by which individuals strive to make sense of violent media content have mainly been studied in the domain of qualitative audience research (e.g., Bartsch et al., 2016; Jørgensen, Skarstein, & Schultz, 2015; Schlesinger et al., 1992; Shaw, 2004). For example, Shaw (2004) conducted in-depth interviews with adults about the function and value of violence in films. Interviewees spoke of the importance of films showing

violence "as it really is" (p. 136). Realism was valued because of the perceived opportunity for insights into unfamiliar violent contexts, (e.g., mafia interactions or inner-city gangs), and because realistic representations might help other viewers see the true negative consequences of violence. Schlesinger et al. (1992) interviewed focus groups of women, including those who had experienced violence, and found that these women "were more sensitive to televised violence, more subtle and complex in their readings, more concerned about possible effects and more demanding in their expectations of the producers of such content" (p. 165). Processes of meaning-making have also been studied in the context of violent news content. For example, Jørgensen et al. (2015) interviewed Norwegian children in the year after the mass killings in Norway on July 22, 2011, and found that they tried to impose narrative structures on the images and descriptions they had encountered in the news. In particular, they tried to offer explanations for the shooting, and struggled to find a resolution to the "story."

Bartsch et al. (2016) revisited and extended these qualitative findings through the theoretical lens of eudaimonic responses. Participants from different backgrounds were interviewed, including professions at risk for exposure to violence (e.g., military and law enforcement personnel), media professionals (e.g., film makers and parental guidance raters), and interviewees from the general population. Participants were asked about examples of violent media content that left a lasting impression and what they had thought about that content. Their reflective thoughts dealt with: (1) the truth value of violent portrayals (learning factual information about, or understanding the authentic experience of violent events in history and current affairs); (2) the life-world relevance of violent media content (reflecting on their own and others' experiences with violence, their own violent impulses, and their strategies for dealing with violence in real life); and (3) the psychological and moral implications of violence (understanding the suffering of victims, the motives of villains, the moral conflicts of heroes and anti-heroes, and broader questions about the role of violence in society and human nature).

Taken together, the qualitative findings underscore audiences' active and reflective use of violent media content as an opportunity to confront and make sense of violence as a painful, yet essential fact of social reality (including life-world experiences, current and historic affairs, as well as broader psychological and moral issues). The findings further document audiences' preference for realistic as opposed to exaggerated, glamorized or sanitized portrayals.

This pattern of qualitative findings is consistent with quantitative work that has identified perceived meaning (Bartsch & Mares, 2014) and realism (Tamborini, Weber, Bowman, Eden, & Skalski, 2013) as important predictors of audiences' preference for violent media content. But how can audiences' self-reported positive outlook on realistic portrayals of violence be reconciled with research suggesting that perceived realism can reinforce aggression effects (Eron, 1982) and cultivation effects

(Hawkins & Pingree, 1980) of violent media content? It is important to note here that research on the reinforcing influence of realism on cultivation and aggression effects has produced inconsistent results (Barlett, Rodeheffer, Baldassaro, Hinkin, & Harris, 2008; Zendle, Kudenko, & Cairns, 2018). Rather than a methodological artifact, this inconsistency of findings might be due to an unobserved difference between naïve and reflective judgments of realism. For example, while children's naïve judgments of television as "magic window" (Hawkins & Pingree, 1980) led to stronger cultivation effects, individuals' reflective judgments of realism had an inverse influence that offset cultivation effects (Shrum, 2006). With this distinction between naïve and reflective realism judgments in mind, it seems reasonable to assume that eudaimonic, meaning-making responses are most likely elicited by portrayals that withstand a critical reality check.

Silver linings – evidence of prosocial effects from reflective processing of violence

Understanding audiences' thoughts about violent media content might be intriguing in its own right. Yet the most important rationale to study such thoughts comes from the role of cognitive reappraisal as a corrective mechanism that can prevent people from causing or tolerating harm to the self and others (Anderson & Bushman, 2002). For example, reflection on one's own violent impulses, and their consequences for the self and others, might motivate individuals to become a morally better person. Perspective taking and empathy with the victims of violence might motivate individuals to help and care. Concern about issues of violence in society or international affairs might motivate political interest and participation. As discussed above, the current study focuses on creating a measure of reflective thoughts about media violence. The operationalization of prosocial effects resulting from such thoughts, are beyond the scope of the current research. Nevertheless, we provide a brief overview of pertinent findings to outline the broader relevance of our research.

General research on individuals' eudaimonic responses to media content has linked such experiences to different types of prosocial outcomes. For example, Oliver et al. (2012) found that feelings of elevation (often elicited as part of eudaimonic responses) gave rise to motivations to embody moral virtues, such as being a better person and helping others. Feelings of empathy elicited by moving stories have been found to result in more positive attitudes and behavioral intentions toward social groups such as immigrants, prisoners, elderly persons, or persons with disabilities (Bartsch et al., 2018; Oliver et al., 2012). Moreover, feelings of empathy and being moved have been found to stimulate processes of cognitive elaboration (Bartsch et al., 2014; Bartsch et al., 2018),

which in turn resulted in heightened interest and information seeking about social and political issues (Bartsch & Schneider, 2014; Bartsch et al., 2018; Oliver et al., 2012). Finally, a study by Tsay-Vogel and Krakowiak (2016) found that film viewers' eudaimonic motivations reduced their propensity for moral disengagement (i.e., their tendency to justify media character's immoral behavior).

These prosocial effects of eudaimonic responses have rarely been studied with a specific focus on media violence, so far. It is interesting to note, however, that some of the stimuli used in these studies (e.g., Bartsch et al., 2014; Bartsch & Schneider, 2014; Tsay-Vogel & Krakowiak, 2016) were, in fact, about issues of violence such as civil war or violent crime. Thus, it seems that the underlying cognitive and affective mechanisms of eudaimonic appreciation, and some of its prosocial effects can also be observed in the context of violent media content. A rare but compelling piece of direct evidence comes from a study by Grizzard et al. (2017) on graphic violence in the news as a motivator of moral effects. Higher levels of graphic violence in news footage about a mass execution conducted by ISIS led to stronger emotional responses, higher levels of moral sensitivity, desires for military and humanitarian intervention, and search for meaning in life.

Taken together, the emerging line of research that links eudaimonic meaning-making with prosocial effects observed in the context of media violence seems to hold particular promise for potential "antidote" or "buffer" effects – which might also help explain individuals' differential susceptibility to negative effects of media violence (Slater et al., 2004; Valkenburg & Peter, 2013). The present study aims to advance the current state of research toward these important goals by providing a measurement approach that specifies the most common types of reflective thought content associated with violent media portrayals.

The present research

The present scale development project builds on the qualitative findings reported above and seeks to make them amenable to quantitative measurement. Our initial item pool was derived from the study of Bartsch et al. (2016), and from other qualitative work on meaning-making from violent media content (Jørgensen et al., 2015; Oliver & Hartmann, 2010; Schlesinger et al., 1992; Shaw, 2004). Categories of statements that frequently occurred in these studies (17 categories) were represented by two items each, and less frequent categories (29 categories) by one item each. Item wording was kept as close as possible to the wording used by the interviewees. Hence, the construction of the item pool was purely data-driven by the qualitative findings, with no a priori assumptions about the number or content of underlying factors. Rather, exploratory factor analysis was used to identify latent dimensions of typical thought content in the data. Such an exploratory approach has the advantage of using the whole complexity of qualitative

findings, while avoiding methodological artifacts that may arise from theory-driven composition and wording of item pools.

We are aware that standardized scale items necessarily oversimplify the complexity of qualitative findings. Yet we believe that both qualitative and quantitative research on media violence can profit from an integrated approach that makes qualitative findings (to some extent) quantifiable, and thus allows researchers to integrate qualitative insights with quantitative methods and associated research topics. Specifically, our aim was to validate the theoretical link between the quantitatively-operationalized concept of eudaimonic appreciation (Oliver & Bartsch, 2010), and the qualitative operationalization of audiences' meaning-making from violent portrayals (e.g., Bartsch et al., 2016; Jørgensen et al., 2015; Schlesinger et al., 1992; Shaw, 2004). To this end, our study includes a series of validation analyses that examine the convergent validity of the newly developed measures of reflective thoughts about violent media content with pre-existing measures of eudaimonic appreciation and perceived realism.

Method

As an international team of researchers, we conducted the scale development and validation studies bilingually in English and German so as to design a measure with sufficient intercultural robustness across our primary research contexts in the US and Germany. To cover the full diversity of violent media content, participants were randomly assigned to name and rate either fictional or non-fictional examples of violent media content, or the most recent violent content they had seen. In addition, we used relatively large and heterogeneous samples from the general population. Though not representative, both national samples covered a wide range of age groups and educational levels to assure that the scales apply more broadly than for student samples. Finally, as noted above, convergent validity with pre-existing measures of eudaimonic appreciation and perceived realism was examined.

Samples and procedure

The scale development and validation studies were conducted with two samples from the US and Germany. US participants were recruited via Amazon's Mechanical Turk (N = 431, aged 18 to 80, M_{age} = 36.5 years, SD = 12.9 years; 54.8% graduated from college or had higher formal education; 61% female) and received a small financial compensation of 1 USD for their participation. The German sample was recruited via the SoSci Panel a heterogeneous, non-profit online panel (N = 412; aged 14 to 80, M_{age} = 41.0 years, SD = 16.0 years; 68.6% graduated from college or had higher formal education; 61% female) and were compensated by a lottery for gift certificates (5 gift certificates, 20 € each). Participants were asked to name

and rate an example of violent media content, and were randomly assigned to choose either a fictional example (film, TV series, novel, etc.), a nonfictional example (news, documentary, Internet footage, etc.), or the most recent violent content they had seen, so as to assure that participants' responses would cover a broad and diverse range of violent media content.

Measures

Reflective thoughts about violent media content

The main part of the questionnaire consisted of 63 items (listed in the Appendix) that were derived from qualitative interview statements about violent media content (Bartsch et al., 2016), (e.g., "I thought about the true story behind it," "I saw it as an opportunity to learn how to react if I were in that situation," "I thought about the moral conflicts and dilemmas the character was facing"). Participants rated how well these statements described their thoughts about the violent content that they had named on a 7-point scale ranging from 1 = "not relevant"/"not at" all to 7 = "a great deal."

Four additional variables were assessed as validation criteria associated with eudaimonic responses. These additional ratings were all recorded on a 7-point scale ranging from 1 = "not at all" to 7 = "very much" and are presented in the following sections.

Appreciation

Participants' eudaimonic appreciation of the violent media content was assessed using the scale of Oliver and Bartsch (2010) that consists of three items: "The [content] was thought-provoking", "I was moved by the [content]", and "I found the [content] to be very meaningful" (USA: Cronbach's $\alpha = .83$, $M = 4.47$, $SD = 1.84$; GER: $\alpha = .85$, $M = 4.83$, $SD = 1.76$). In addition to this general measure of appreciation, cognitive and affective components of the construct were assessed as separate variables.

Feeling moved

The affective component of eudaimonic appreciation, labeled "feeling moved," (Bartsch et al., 2014) was assessed using three items. Participants rated the extent to which the violent content made them feel "moved," "touched," and "poignant" (USA: Cronbach's $\alpha = .79$, $M = 3.21$, $SD = 1.76$; GER: $\alpha = .80$, $M = 3.96$, $SD = 1.73$).

Reflectiveness

The cognitive component of eudaimonic appreciation was assessed using participant's ratings of agreement that the violent content made them

"reflective," "contemplative," and "thoughtful" (USA: Cronbach's α = .85, *M* = 4.02, *SD* = 1.87; GER: α = .76, *M* = 4.12, *SD* = 1.67).

Perceived realism

Perceptions of the content as realistic are not a necessary constituent of eudaimonic appreciation. However, given the prominent role of realism in both qualitative and quantitative research on violent portrayals (e.g., Bartsch et al., 2016; Schlesinger et al., 1992; Shaw, 2004; Tamborini et al., 2013), perceived realism was included as an additional validation criterion. We used Bartsch and Mares' (2014) measure that consists of three items: "the people in the [content] were just like in real life", "the events in the [content] were just like real life", and "the plot of the [content] was realistic" (USA: Cronbach's α = .93, *M* = 3.92, *SD* = 2.12; GER: α = .95, *M* = 4.28, *SD* = 2.17).

Results

Scale development

To examine underlying dimensions of reflective thoughts about violent media content, we ran factor analyses on the initial item pool of 63 items using principal axis factoring with Promax rotation (κ = 4). Analysis of the merged US and German data set revealed 13 components with eigenvalues greater than 1 that accounted for 60.67% of the variance. However, the last substantial drop in eigenvalues appeared after the fifth factor. A follow-up analysis that requested the extraction of five factors accounted for 47.32% of the variance (for factor analysis results of the full initial item pool, eigenvalues and variance explained, see Appendix). The five factors reflected the following dimensions of reflective thoughts about violent media content: (1) thoughts about human cruelty and suffering from violence, (2) thoughts about own or close others' experiences with violence, (3) thoughts about the moral complexities of violence, (4) thoughts about the true story behind violent media content, and (5) thoughts about strategies learned for dealing with violence in real life.

Scale items to represent these five dimensions were selected based on two criteria: (a) high and unambiguous factor loadings (pattern matrix loadings on the main factor above .50, and cross-loadings on other factors below .30), and (b) representation of the core themes and topics that loaded on the factor with minimal redundancy in the wording of scale items. While the second criterion may work against the scale's statistical consistency, we considered it essential to conserve as much as possible of the meaning complexity of qualitative data that informed our item pool. For each of the five factors, four items were selected for scale construction, resulting in a reduced set of 20 items (English and German versions of these scale items are displayed in Table 1).

Table 1. Factor analysis results for the selected scale items (US and German data were analyzed separately).

	1	2	3	4	5
1 Human cruelty and suffering from violence					
I was shocked at how cold-blooded the violence was.	**.73**	.09	−.25	−.01	.00
Ich war geschockt über die Kaltblütigkeit der Gewalt.	***.86***	*−.02*	*−.02*	*−.05*	*−.02*
I was upset to see violence against innocent victims.	**.69**	−.03	−.12	.11	.12
Es hat mich wütend gemacht, Gewalt gegenüber unschuldigen Opfern zu sehen.	***.67***	*−.07*	*−.16*	*.11*	*.21*
I wondered what must have happened to a person to develop such cruelty.	**.68**	.08	.25	−.05	−.08
Ich fragte mich, was mit einer Person passiert sein muss, dass sie solche Grausamkeit entwickelt.	***.78***	*−.10*	*.17*	*.05*	*−.13*
I thought about the horror that humans can inflict on each other.	**.64**	−.11	.17	.16	−.10
Ich dachte über die Grausamkeiten nach, die sich Menschen gegenseitig antun können.	***.87***	*.01*	*−.05*	*−.11*	*.03*
2 Own and close others' experiences with violence					
The character's situation reminded me of my own life.	−.07	**.89**	−.05	.14	−.08
Die Situation. in der sich die Person befunden hat, erinnerte mich an mein eigenes Leben.	*−.19*	***.69***	*−.08*	*−.02*	*.19*
It made me think about my own experiences with violence.	.22	**.66**	−.01	−.13	.14
Ich musste über meine eigenen Erfahrungen mit Gewalt nachdenken.	*−.03*	***.91***	*−.06*	*.06*	*−.09*
I felt it helped me understand violence experienced by a friend or family member of mine.	−.10	**.56**	.01	.16	.09
Ich hatte das Gefühl. die Gewalt besser zu verstehen, die Freunde oder Familienmitglieder erlebt haben.	*.17*	***.51***	*.01*	*.09*	*.09*
The satisfaction I felt at evil being punished made me think about my own violent impulses.	.02	**.51**	.33	−.18	.00
Die Zufriedenheit, die ich fühlte, als das Böse bestraft wurde, ließ mich über meine eigenen Gewaltimpulse nachdenken.	*.13*	***.59***	*.20*	*−.08*	*−.11*
3 Moral complexity of violence					
I was impressed by the character's fighting spirit and endurance.	−.07	−.03	**.71**	−.10	.19
Ich war von dem Kampfgeist und dem Durchhaltevermögen der Person beeindruckt.	*−.11*	*.00*	***.74***	*−.07*	*.04*
I thought about the moral conflicts and dilemmas the character was facing.	.08	−.08	**.65**	−.03	.10
Ich dachte über die moralischen Konflikte und schweren Entscheidungen nach, mit denen die Person konfrontiert war.	*.04*	*−.06*	***.42***	*.11*	*.11*
I couldn't help but sympathize with this character despite all the bad things s/he had done.	−.07	.16	**.60**	−.01	−.16
Ich musste einfach mit der Person mitfiebern, trotz all Ihrer schlimmen Taten.	*−.12*	*.04*	***.85***	*−.02*	*−.01*
I thought about the moral of the story.	.05	−.03	**.60**	.32	−.02
Ich dachte über die Moral der Geschichte nach.	*.34*	*.00*	***.50***	*.07*	*−.11*
4 The true story behind violent media content					
I thought the violence in this story was a wakeup call for people to take the issue seriously.	.19	.10	−.17	**.67**	.05
Ich dachte. dass die Gewalt in der Geschichte Menschen aufrütteln soll, das Problem ernst zu nehmen.	*.16*	*.12*	*−.02*	***.49***	*.12*
I thought about the true story behind it.	.10	.03	.00	**.65**	.05
Ich habe an die wahre Geschichte dahinter gedacht.	*−.02*	*−.15*	*−.02*	***.79***	*.15*
I thought it was important to confront the full truth about the violence, with nothing down-played.	.22	−.02	−.02	**.51**	.09
Ich dachte, dass es wichtig ist, die ganze Wahrheit über die Gewalt zu zeigen und nichts herunterzuspielen.	*.07*	*.03*	*.13*	***.45***	*.23*
I thought about the historical or current events in the story.	.20	−.04	.21	**.47**	−.11
Ich dachte über die historischen oder aktuellen Ereignisse der Handlung nach.	*−.05*	*.05*	*.00*	***.99***	*−.23*

(*Continued*)

Table 1. (Continued).

	1	2	3	4	5
5 Strategies learned for dealing with violence in real life					
I saw it as an opportunity to learn how to react if I were in that situation.	.19	−.04	−.05	−.07	**.89**
Ich sah es als eine Gelegenheit, zu lernen, wie ich in solch einer Situation reagieren könnte.	*.03*	*−.15*	*.04*	*−.07*	***.90***
I felt more confident that I could keep a clear head if I saw a situation like this in real life.	−.11	−.03	.00	.06	**.81**
Ich fühle mich dadurch besser in der Lage, einen klaren Kopf zu bewahren, wenn ich im echten Leben so eine Situation erleben würde.	*−.01*	*.14*	*−.05*	*−.01*	***.87***
I learned strategies for dealing with that type of violence.	−.13	.14	.06	.13	**.67**
Ich habe Strategien gelernt, um mit dieser Art von Gewalt umzugehen.	*.05*	*.15*	*.32*	*−.16*	***.32***
I saw it as a lesson on how to be a leader in times of violent conflict.	−.04	.12	.17	.00	**.52**
Ich sah es als Lektion, wie man in gewalthaltigen Konflikten eine Führungsrolle ausfüllen kann.	*−.02*	*.18*	*.04*	*.07*	***.53***
Eigenvalue	6.22	1.14	1.76	0.90	3.22
	6.88	*1.47*	*1.31*	*1.01*	*2.80*
% Variance explained	31.12	5.72	8.80	4.51	16.10
	34.38	*7.34*	*6.57*	*5.03*	*14.01*
Cronbach's alpha	0.80	0.77	0.70	0.79	0.83
	0.78	*0.75*	*0.75*	*0.78*	*0.80*
M	5.10	2.13	3.94	4.34	2.70
	5.29	*2.21*	*3.36*	*4.61*	*2.49*
SD	1.66	1.38	1.71	1.89	1.63
	1.57	*1.45*	*1.71*	*1.81*	*1.49*

This table shows the pattern-matrix of the principal axis analysis with Promax rotation requesting five factors. Primary factor loadings are highlighted in boldface. Values for the US sample are displayed in normal font and values for the German sample are displayed in italics. Eigenvalues, variance explained, Cronbach's α, means and standard deviations for each subscale are displayed at the bottom of the column for the respective factor.

Comparison of measurement properties across countries

To compare measurement properties of the scale items across the two national samples, we factor analyzed the selected set of 20 scale items separately for the US and German data, again using principal axis factoring with Promax rotation ($\kappa = 4$). The same factor structure emerged for both national samples: eigenvalues and variance explained per factor were similar, and all primary loadings of the scale items were on the same factor. Table 1 reports the English and German wording of the scale items, their factor loadings in the separate factor analyses for the US and German data, the eigenvalues and variance explained by each factor. In addition, reliability estimates using Cronbach's alphas, means and standard deviations were calculated separately for each subscale in the US and German samples. All subscales showed good reliability in both countries, with Cronbach's alpha ranging from .70 to .83. Scale means and standard deviations were comparable across countries as well. Further evidence of comparable measurement properties comes from the scale validation analyses reported in the next

section, where a similar pattern of correlations of the subscales with the scale validation criteria emerged for both countries (see Table 2).

Scale validation analyses

To examine associations between the five newly developed scales on reflective thoughts about violent media content and other established indicators of eudaimonic media experiences and perceived realism, we conducted a series of correlation analyses. As reported in Table 2, higher ratings on the reflective thoughts scales were consistently associated with higher values on the validation criteria across countries: appreciation, reflectiveness, feeling moved, and perceived realism of the media content. We ran these validation analyses separately for both countries. All subscales were significantly and positively correlated with the validation criteria. The more reflective thoughts participants reported about the violent media content they had named and rated, the more they characterized their experience in terms of eudaimonic appreciation, as measured by the appreciation scale and specific measures of affective components (feeling moved) and cognitive components (reflectiveness) of eudaimonic appreciation. Higher levels of reflective thoughts were also associated with perceptions of the content as more realistic. We observed only one exception: the moral complexity factor was

Table 2. Correlations of the five dimensions of the reflective thoughts about media violence scale, with indicators of eudaimonic media experiences, and perceived realism (US and German data were analyzed separately).

Variables	1	2	3	4	5	6	7	8	9
1. Human cruelty and suffering from violence	–								
2. Own and close others' experiences with violence	.10* *.26****	–							
3. Moral complexity of violence	.09+ *.19****	.37**** *.28****	–						
4. True story behind violent media content	.59**** *.46****	.30**** *.34****	.22**** *.25****	–					
5. Strategies learned for dealing with violence in real life	.14** *.16***	.55**** *.30****	.37**** *.26****	.38**** *.32****	–				
6. Appreciation	.25**** *.49****	18**** *.23****	.39**** *.23****	.47**** *.57****	.27**** *.13**	–			
7. Feeling moved	.30**** *.44****	.36**** *.23****	.35**** *.27****	.50**** *.41****	.44**** *.11**	.60**** *.69****	–		
8. Reflectiveness	.31**** *.44****	.26**** *.21****	.43**** *.25***	.51**** *.49****	.37**** *.20***	.62**** *.66****	.68**** *.68****	–	
9. Perceived realism	.36**** *.32****	.19**** *.29****	.10+ *–.05*	.62**** *.57****	.29**** *.18***	.40**** *.53****	.24**** *.42****	.39**** *.51****	–
M	5.10 *5.29*	2.13 *2.21*	3.94 *3.36*	4.34 *4.61*	2.70 *2.49*	4.47 *4.83*	3.21 *3.96*	4.02 *4.12*	3.92 *4.28*
SD	1.66 *1.57*	1.38 *1.45*	1.71 *1.71*	1.89 *1.81*	1.63 *1.49*	1.84 *1.76*	1.76 *1.73*	1.87 *1.67*	2.12 *2.17*

Intercorrelations of the variables in the US sample (n = 431) are displayed in in normal font and values for the German sample (n = 412) are displayed in italics. Means and standard deviations are presented in the horizontal rows. +p < .10, *p < .05, **p < .01, ***p < .001

unrelated to perceived realism in both samples. This unexpected finding will be dealt with in the discussion section.

Discussion

In this paper, we set out to inquire what kinds of reflective thoughts individuals may have in mind when using violent media content. Our approach to an answer was entirely data-driven – proceeding bottom-up from qualitative interview statements in previous research (Bartsch et al., 2016; Jørgensen et al., 2015; Oliver & Hartmann, 2010; Schlesinger et al., 1992; Shaw, 2004) that were adapted into standardized questionnaire items. Two samples from the US and Germany rated their level of agreement with each of the statements, regarding a self-nominated exemplar of violent media content (either fiction or nonfiction, or the most recent violent content they had seen, depending on condition). Finally, participants' ratings were factor analyzed to identify typical thought patterns, and to select representative items for scale construction.

Among the dimensions of typical thought content that emerged from these analyses, factor 1, *human cruelty and suffering from violence*, most clearly reflects moral and empathic attitudes against the use of violence. The moral and empathic thought processes represented by this factor that are reminiscent of Zillmann and Cantor's (1977) theory of affective disposition, which explains how individuals' moral judgments shape their empathy and perspective taking with morally good, and against morally bad characters. In line with the concept of affective disposition, factor 1 reflects individuals' moral judgment of violent acts as "cruel" and "cold-blooded," associated with strong feelings of empathy ("shocked," "upset") about "violence against innocent victims," and "the horror that humans can inflict on each other." Empathy and moral norms against the use of violence have been identified as key corrective mechanisms against aggressive tendencies, but research has shown that repeated exposure to media violence can undermine both (Anderson et al., 2003; Funk, Buchman, Jenks, & Bechtoldt, 2003). Thus, the finding of moral and empathic responses to violent portrayals reflected by this factor may seem counterintuitive. However, evidence of desensitization effects on a general level does not necessarily imply that all types of violent portrayals desensitize all types of media users alike. Rather, it may be worthwhile to explore possible differences in content features and personal factors that can either undermine or strengthen individuals' moral and empathic responses to violent media content.

Factor 2, *own and close others' experiences with violence*, seems to reflect processes of reappraisal as conceptualized in theories of cognitive emotion regulation (Gross & John, 2003). This line of research suggests that individuals' ability to make sense of negative experiences, and to rethink them in

more positive ways, constitutes an important factor of emotional stability, well-being, and interpersonal functioning. In line with the theoretical concept of cognitive reappraisal, factor 2 suggests that individuals used violent content as an opportunity to think about their "own life," "own experiences," "own violent impulses," or "violence experienced by a friend or family member." This role of media use in cognitive emotion regulation is reminiscent of Aristotle's concept of catharsis. While the venting model of catharsis has failed to produce empirical support (Bushman, Baumeister, & Stack, 1999), recent research suggests that using media to confront and contemplate painful experiences can lead to positive effects on health and well-being (Khoo & Graham-Engeland, 2014). Hence, the concept of catharsis might be fruitfully revisited within the alternative theoretical framework of cognitive emotion regulation. Despite the lack of evidence for venting effects, catharsis – in the sense of reappraisal of painful experiences with violence – might act as buffer against cultivation effects if it strengthens individuals' self-confidence in dealing with "mean world" situations.

Factor 3 deals with *the moral complexity of violence*. It seems to reflect a more flexible pattern of moral reasoning than factor 1. It goes beyond the good-bad dichotomy and focuses on "moral conflicts and dilemmas," and may even involve empathy with the perpetrators of violence, as expressed in the item "I couldn't help but sympathize with this character despite all the bad things s/he had done." On the one hand, this might reflect relatively advanced moral reasoning (e.g., awareness of conflicting moral demands) and compassion even for troubled characters in need of moral redemption. On the other hand, this thought pattern may reflect individuals' fascination with morally ambiguous situations and characters – which may involve processes of moral disengagement (i.e., the defense of reprehensible acts in the case of likable characters, Shafer & Raney, 2012). Moral disengagement provides an example of how reflective thought processes can lead to dysfunctional outcomes under the influence of cognitive biases – in this case, a bias toward positive moral judgment of characters who are liked for non-moral reasons such as wit, strength or attractiveness. Tsay-Vogel and Krakowiak (2016) found that individuals' propensity for moral disengagement was contingent on their motivations for using violent content, such that hedonic motivations reinforced, and eudaimonic motivations inhibited moral disengagement. Given that factor 3 was correlated with the validation criteria for eudaimonic responses, its possible dysfunctional relationship with moral disengagement remains an open empirical question. Further, it is interesting to note that moral complexity was the only factor that was uncorrelated with perceived realism. Again, it is not entirely clear what this pattern means. It might reflect the prevalence of morally ambiguous anti-hero characters in fantasy narratives such as *The Walking Dead*, or *Game of Thrones* (both of which were frequently named in the fiction condition). The popularity of

such narratives highlights individuals' intellectual fascination with morally complex characters and stories. At the same time, the possible association of this factor with moral disengagement raises the caveat that not all kinds of reflective thoughts necessarily function as moral correctives.

Factor 4 revolves around *the true story behind violent media content*, which is broader in scope than the focus of factor 2 on life-world situations that respondents were involved in themselves. This factor includes thoughts about "historical or current events," how important it is "to confront the full truth about the violence," and how violent portrayals may serve as a "wakeup call for people to take the issue seriously." The potential of this factor for prosocial effects likely goes beyond the possible moral buffer effects of factor 1 against aggression effects. Rather, this pattern of thoughts may contribute to civic effects such as issue interest, information seeking, and engagement for social and political causes. Such prosocial effects on a broader societal level have been documented by research on eudaimonic media experiences in general (Bartsch & Schneider, 2014; Oliver et al., 2012), which might be fruitfully extended to violent media content in particular.

Factor 5, *strategies learned for dealing with violence in real life*, bears particular resemblance with the notion of reappraisal as conceptualized in the GAM (Anderson & Bushman, 2002), as a driver of thoughtful action in violent real-life situations. This factor is concerned with thoughts about "strategies," "how to react," "keep a clear head," and "how to be a leader" during situations of violent conflict. This factor seems to reflect individuals' pursuit of responsibility at dealing not only with their own violent impulses but also with the broader situational context involving other potential perpetrators and victims of violence. Hence, it seems promising to examine potential buffer effects of this factor against the negative outcomes of implicit learning of aggressive schemata and scripts. It is important to note, however, that according to the GAM not all forms of reflective reappraisal and thoughtful action necessarily lead individuals to restrain from aggressive impulses. In some situations, reflective processing might lead individuals to conclude that aggression is necessary or justified. Nevertheless, as proposed by the GAM, reflective reappraisal can serve as a key corrective mechanism that opens an opportunity for alternative, nonviolent courses of action.

Taken together, our scale development study provides evidence of and measurement for five types of reflective thoughts about violent media content that can meaningfully be interpreted within the theoretical context of research on cognitive reappraisal, moral judgment, empathy, and involvement with social and political issues. Several factors evince potential for prosocial effects. Factors 1, 2 and 5 seem to reflect reappraisal processes that might counteract fear- and aggression-related effects from implicit learning processes as described by the GAM (Anderson &

Bushman, 2002), and by cultivation theory (Gerbner & Gross, 1976). In addition, factors 1 and 4 revealed thought patterns concerned with moral, empathic, and civic values that might counteract desensitization effects (Anderson & Bushman, 2002). Factor 3 needs to be interpreted more cautiously, in light of its possible association with biased moral reasoning as described by theories of moral disengagement (Shafer & Raney, 2012). Likewise, it remains to be examined, whether the focus of strategies for dealing with violence reflected in factor 4 is predominantly nonaggressive in nature. Generally, it is important to note that, for all factors alike, our post-hoc interpretation awaits further empirical scrutiny.

What we can report with sufficient confidence at this point, however, is that the factor structure of the five scales was robust across two relatively large and diverse samples from the US and Germany. Moreover, all subscales were correlated with three validation criteria indicative of eudaimonic responses: appreciation, being moved, and reflectiveness (Bartsch et al., 2014; Oliver & Bartsch, 2010), and with perceived realism (Bartsch & Mares, 2014) except for the moral complexity scale.

Limitations

Despite the promise that lies in our exploratory analyses indicating relative intercultural robustness of the scales across the US and Germany, confirmatory measurement invariance analyses using independent samples from the US and Germany, and from other, non-Western media cultures are needed. While media violence abounds around the globe, the normative foundations of moral reasoning and reappraisal processes might differ as a function of culture, which may lead to the emergence of different, culture-specific thought patterns. In addition, the scales need to be cross-validated with other related measures. Specifically, the present validation analyses were limited to state measures of eudaimonic appreciation (which are substantially correlated because they are part of the same theoretical construct) and perceived realism. Further validation using trait measures (e.g., eudaimonic motivation and need for cognition) is required – along with additional analyses to validate our post-hoc interpretation of the factors with regard to measures of cognitive emotion regulation, moral values, empathy, political involvement, or moral disengagement for example. In particular, it seems important to disentangle aggressive and non-aggressive types of reflective thoughts. Moreover, the robustness of the factor structure and measurement properties of the scales need to be monitored and validated over time. For the sake of future longitudinal studies, we tried to use items with sufficient timelessness but, clearly, regular follow-up is needed to keep step with the short innovation cycles of a changing media landscape.

Conclusion

As noted in the introduction, the current scale development study is embedded in a broader and more ambitious project of integrating reflective thought processes into the big picture of media violence research. Figure 1 illustrates how we theorize that reflective thoughts as measured by our scales might factor into the general aggression model – namely in the form of reappraisal, which serves as a corrective mechanism against impulsive action driven by aggressive schemata and scripts. If reflective thought patterns (including moral evaluation, empathy and nonaggressive strategies) are learned and rehearsed during exposure to violent media content then they might reinforce processes of reappraisal and thoughtful action later on, in real life situations. The five patterns of reflective thoughts that emerged from our data seem to open promising avenues for future research to test this assumption. Three factors seem directly related to reappraisal processes that might counteract fear- and aggression-related effects. Two additional factors seem to reflect moral, empathic, and civic concerns about violence that might counteract desensitization effects. At this point, empirical evidence of such buffer effects of reflective thoughts is lacking, but we hope that the quantitative measurement approach provided by our scales may help advance media violence research toward this goal.

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Appendix. Factor Analysis of the Initial Item Pool for US and German Data Combined

	1	2	3	4	5
I was shocked at how cold-blooded the violence was.	**.78**	.05	−.09	−.03	−.25
I wondered what must have happened to a person to develop such cruelty.	**.77**	.13	.17	.00	−.32
I was upset to see violence against innocent victims.	**.72**	−.19	−.08	.15	.01
I thought about how violence breeds further violence.	**.71**	−.09	.05	−.07	.06
The violence depicted made me reflect about the state of our society.	**.67**	.03	−.16	.19	−.01
I thought about what would motivate someone to perpetrate such atrocities.	**.66**	.00	.14	.15	−.24
I worried that people might stop caring when they see this kind of violence.	**.61**	.18	−.32	−.06	.09
I thought about the horror that humans can inflict on each other.	**.60**	−.16	.13	.22	−.21
I thought about the terrible effects that psychological violence can have.	**.59**	−.15	.18	.06	.09
I felt a sense of helplessness. as if I were in the situation and couldn't help the victim.	**.58**	.13	−.18	−.05	.25
I worried that such acts of violence might be imitated by others in real life.	**.57**	.21	−.33	.05	.13
I wondered how kids might see this and be affected.	**.56**	.18	−.16	.02	−.02
I thought about how suddenly death can happen.	**.56**	.05	.18	.00	.04
I thought that the psychological harm of violence is sometimes worse than the physical harm.	**.55**	−.11	.21	.06	.03
I began to realize that some people are just fundamentally bad.	**.50**	−.23	.07	−.02	.28
I felt that seeing the bad guys win was disappointing but realistic.	**.48**	.22	.09	−.18	.14
I thought about the role of bystanders who allow violence to happen.	**.48**	.20	.05	.07	.02
I thought about the author's motives in showing the violence.	**.48**	.16	.29	−.21	−.06
I wondered whether things that extreme happen in reality.	**.44**	−.07	.13	−.12	.12
I felt very sympathetic with the victim's suffering.	**.44**	−.35	.19	.38	.10
Afterwards, I thought about acts of violence in the story that really took me by surprise.	**.43**	.02	.31	.01	.09
I thought about how this person evolved from a nice, ordinary person into a really bad …	**.41**	.10	.15	−.09	.23
I wondered how it would feel to be faced with mortality like that.	**.41**	−.08	.15	.18	.14
I thought about the responsibility involved in having a job that might require violence.	**.35**	.18	.08	−.04	.17
The person's situation reminded me of my own life.	−.26	**.79**	.06	.19	−.04
It made me think about my own experiences with violence.	.06	**.76**	.02	.11	−.11
The violence reminded me of bad times in my own life.	.03	**.75**	−.06	.10	.01
I felt it helped me understand violence experienced by a friend or family member of mine.	.02	**.67**	−.04	.12	.02
The satisfaction I felt at evil being punished made me think about my own violent impulses.	.01	**.65**	.20	−.03	−.11
I cared about the violence because I personally know someone who experienced it.	.01	**.61**	−.12	.33	−.11
I thought about all the similarities between myself and this person.	−.15	**.58**	.32	.08	.00
I wondered whether I'd ever betray my principles and moral values for my goals like this person.	.17	**.40**	.30	−.17	−.01
I thought the brutality of the depiction was an anti-violence message.	.01	**.36**	.10	.34	−.01
I was surprised to see violence perpetrated by a woman.	.18	**.35**	.12	−.10	.12

(*Continued*)

(Continued).

	1	2	3	4	5
I thought about violence as a legitimate way to solve problems in certain situations.	−.05	**.33**	.31	−.18	.28
I couldn't help but sympathize with this person despite all the bad things s/he had done.	−.14	.31	**.63**	−.01	−.15
I was impressed by the character's fighting spirit and endurance.	−.18	.05	**.60**	.05	.20
I thought about the moral conflicts and dilemmas the person was facing.	.15	−.19	**.60**	−.01	.14
I thought about the moral of the story.	.16	.00	**.55**	.28	−.08
I thought about contradictory facets of the person's personality and behavior.	.39	.08	**.49**	−.15	.01
I wondered about the open questions that remained unanswered in the story.	.34	−.01	**.46**	.14	−.12
I was impressed by the hardships the person was willing to endure for the sake of others.	−.17	.07	**.45**	.17	.30
I thought that human beings are often simultaneously victims and perpetrators of violence.	.29	−.07	**.45**	.02	.02
It made me think that despite all the violence there is still inherent good in people.	−.05	−.04	**.44**	.09	.29
I thought that sometimes violence is justified for a higher goal.	−.16	.20	**.37**	−.12	.32
I thought about the true story behind it.	−.01	−.01	.05	**.66**	.23
I thought about the historical or current events in the story.	.03	.12	.15	**.63**	−.14
I thought, "this is real," "this really happens."	.20	.03	−.14	**.59**	.08
I thought it was important to confront the full truth about the violence, with nothing down-played.	.08	.17	.05	**.53**	.07
I thought the violence in this story was a wakeup call for people to take the issue seriously.	.22	.17	−.08	**.51**	.09
I found it eye opening to see the violence that is actually going on.	.34	.02	−.20	**.46**	.10
I thought about the meaning of the violence in the story.	.21	.07	.37	**.42**	−.15
I felt it was giving me an authentic impression of what it is like to experience violence in real …	.11	.14	−.03	**.40**	.19
I thought that I wanted more information about those people and events.	−.15	.11	.26	**.39**	.12
I thought that things like this could actually happen to me.	.16	.28	−.19	**.33**	.30
I saw it as an opportunity to learn how to react if I were in that situation.	.05	−.18	.08	.11	**.84**
I felt more confident that I could keep a clear head if I saw a situation like this in real life.	−.11	−.06	.18	.13	**.77**
I saw it as a lesson on how to be a leader in times of violent conflict.	−.09	.18	.17	.05	**.57**
I learned strategies for dealing with that type of violence.	−.05	.18	.21	.05	**.54**
I analyzed how others dealt with the situation so I could be better prepared myself.	−.02	.05	.31	.23	**.43**
I wondered. "What if this would happen to me, how would I react, what would I do?"	.26	−.02	−.05	.19	**.38**
I thought about how much the protective instinct is part of male identity.	.08	.18	.35	−.14	**.37**
I saw it as a chance to experience a dangerous situation without any real harm.	.01	.27	.30	−.13	**.31**
Eigenvalue	18.89	5.93	3.39	2.20	1.92
% Variance explained	29.98	9.41	5.38	3.50	3.05

This table shows the pattern-matrix of the principal axis analysis with Promax rotation requesting five factors. Primary factor loadings are highlighted in boldface.