"Sad Movies Don't Always Make Me Cry"

The Cognitive and Affective Processes Underpinning Enjoyment of Tragedy

Dohyun Ahn,[1] Seung-A Annie Jin,[2] and Ute Ritterfeld[3]

[1]Sungkyunkwan University, Seoul, Korea, [2]Department of Communication, Boston College, Chestnut Hill, MA, USA, [3]Technical University, Dortmund, Germany

Abstract. This study examined the role of sadness in the process of enjoying tragedy. Sadness, perceived reality, involvement, and enjoyment were measured after participants watched a sad film. The results from structural equation modeling (SEM) analyses indicated that a tragic film induces sadness and that sadness is a positive predictor of perceived reality of the story and sense of involvement. Involvement, in turn, is a positive predictor of enjoyment of the sad film. Sadness predicted subject-oriented enjoyment (measured by a self-referent item: "I enjoyed the movie") more significantly than object-oriented enjoyment (measured by an object-referent item: "The movie entertained me"). Perceived reality fully mediated object-oriented enjoyment, but only partially mediated subject-oriented enjoyment.

Keywords: enjoyment, perceived reality, sadness, structural equation modeling, tragedy

Introduction

Some of the most challenging questions in the domain of media entertainment are how and why people enjoy tragedy. Witnessing others' pain, even though it is fictional, is generally not considered entertaining; nevertheless, people seek out pain-inducing media content for the very purpose of enjoyment. Tragedy poses even more challenges than other negatively valenced genres such as suspense or mystery because tragedy by definition does not end with an uplifting or hopeful outcome (Oliver, 1993). There have been various attempts to solve the enjoyment-of-tragedy paradox, but none of the discussions has reached a consensus on how or why it exists (For a review, see Ahn, 2011; Knobloch-Westerwick, 2006; Oliver, 2003).

Even though it remains unclear how (processional link) and why (motivational factor) people enjoy tragedy, previous studies have extensively examined the relationship between pain and enjoyment of sad films. Though feeling sad is not entertaining, feeling sad emotions (i.e., metaemotion) can be entertaining as long as the appraisal of the sad feelings is accepted positively (Oliver, 1993; Oliver, Weaver, & Sargent, 2000). For example, downward comparison (comparing oneself with someone in a worse situation) brings comfort to people who are in distress because they perceive depressing content as uplifting (Mares & Cantor, 1992). Additionally, tragedy can increase people's capacity to cope with real tragedy (Goldenberg, Pyszczynski, & Johnson, 1999). Relatedly, tragedy appeals to some people because it provides the feeling of empathy with those suffering in the media content (Mills, 1993).

Previous studies provide plausible explanations for enjoyment of tragedy, but they do not draw a whole or conclusive picture. The missing piece is sadness and the role that it plays in this phenomenon. One possible function of sadness is to be a mediator between the processes of comprehending and enjoying a sad story. When a narrative is compelling, it elicits strong emotions that may increase viewer involvement. In this case, a sad story induces sadness, which may enhance perceived reality of the story and one's sense of involvement. Consequently, involvement may result in enjoyment of sad films (see Figure 1). If feeling sad is a positive predictor of perceived reality of a film, people perceive the film to be realistic because they feel sad, not vice versa. This notion is quite counterintuitive. According to common sense, people should feel sad because of realistic descriptions of sad events and characters. Nevertheless, theories on emotions and moods (e.g., Gasper, 2004) support the counterintuitive notion that sadness may enhance reality perception. The following sections discuss theoretical rationales for this main thesis of the current article.

Two Types of Enjoyment

Enjoyment broadly refers to positive affective responses to media content (Oliver & Nabi, 2004). As the core of entertainment (Vorderer, Klimmt, & Ritterfeld, 2004), enjoyment
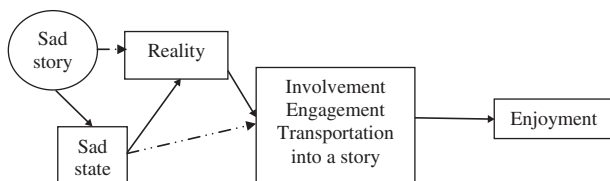
Figure 1. The processes of enjoyment of tragedy.

has been conceptualized as an attitude with affective, cognitive, and behavioral components (Nabi & Krcmar, 2004), a result of transportation into a narrative world (Green, Brock, & Kaufman, 2004), a consequence of flow state (Sherry, 2004), a sense of pleasure derived from dispositions toward characters in drama (Raney, 2004), and a coalescence of social norms, viewing situations, and program content (Denham, 2004). Despite diverse conceptions, a common premise is that the core of enjoyment is a pleasurable response to mediated content. From the functional perspective, humans exhibit pleasurable responses when their experiences have a positive impact on their long-term survival and reproduction (Fredrickson, 1998). Humans can experience a simulated environment's mimicked events and actions as real and actual. Thus, entertainment media can function as a safe and closed environment for humans (Vorderer, Steen, & Chan, 2006). People can enjoy watching sad movies because it increases their ability to handle tragic events via a "mental playground" that enables them to experience realistic tragedies safely (Ahn, 2011).

Media enjoyment encompasses two aspects of media experiences. One is the media content that derives a sense of reality from a fictional story, and the other is the audience's subjective response to that media content. Thus, enjoyment comprises two components: subject-oriented evaluation and object-oriented evaluation. Subject-oriented enjoyment refers to the evaluation of the subjective experience that can be measured by self-referent items such as "I enjoyed the story" or "I was entertained by the movie," whereas object-oriented enjoyment refers to the evaluation of the objective media products that can be measured by object-referent items such as "The story was entertaining" or "The movie was enjoyable." These distinct operationalizations of enjoyment become clear in the case of tragedy. Objectively, a sad story is not entertaining, but subjectively, "I" may experience the negative story in a positive way. Therefore, self-referent enjoyment is not necessarily confined by the objective valence of mediated contents. As such, self-referent enjoyment should be predicted by sad emotions both directly and indirectly. In contrast, object-referent enjoyment is restricted by the objective valence of contents. As such, there must be a mediating factor that makes the experience of the content enjoyable. Viewers may perceive a story to be realistic, and the perceived reality of the story may make it enjoyable. Based on these theoretical rationales, we proposed the first hypotheses:

Hypothesis 1: Perceived reality will fully mediate the path from sadness to object-oriented enjoyment, but

will only partially mediate the path from sadness to subject-oriented enjoyment. Because sadness predicts self-referent enjoyment both directly and indirectly, whereas it predicts object-referent enjoyment only directly, the effect size of self-referent enjoyment should be greater than object-referent enjoyment in the enjoyment of tragedy.

Hypothesis 2: Sadness will predict self-referent enjoyment with greater effect size than object-referent enjoyment.

Perceived Reality and Involvement

Stories are about "human or human-like intention and action and the vicissitudes and consequences that mark their course" (Bruner, 1986, p. 13). Unlike the paradigmatic modes of thinking that employ a logical construction of the world, narrative constructions do not provide empirical "truth" but only achieve "verisimilitude" (Bruner, 1991). That is, stories are about the *likeliness* of actual worlds. Even though stories do not offer verifiable truth, people tend to perceive reality from fictional events, actions, and relationships in stories. Oatley (1999) even suggested that fictional narratives could be twice as true as factual explanation. Among three types of truth including correspondence (i.e., factual truth), coherence (i.e., causal truth by simulation), and personal relevance (i.e., emotional truth), fictional narratives meet the last two criteria (i.e., coherence and personal relevance), whereas nonfictional explanations only satisfy the first criterion (i.e., correspondence) (Oatley, 1999).

Involvement is a multicomponent concept encompassing cognitive, affective, and conative responses to a medium, messages, a story, characters in a story, events, situations, or social issues (Wirth, 2006). In the context of narrative media consumption, involvement can be conceptualized as absorption in a narrative (Slater & Rouner, 2002). Absorption refers to vicariously experiencing events and emotions in a fictional narrative as if they were real. Consuming a narrative immerses an individual in the story line so that he or she feels as if he or she is actually experiencing events in the narrative through empathizing with the characters. Such immersive experiences are termed *transportation* (Gerrig, 1993; Green & Brock, 2000, 2002) or "presence" (Biocca, 2002; Park, Lee, Jin, & Kang, 2010). Gerrig (1993) conceptualized transportation as analogous to physical travel; a reader or viewer enters another world and returns to the world of origin after the transportation. It is "a distinct mental process, an integrative melding of attention, imagery, and feelings" (Green & Brock, 2000, p. 701). The theory of presence assumes a similar analogy: "being there," which is described as "we are pushed through the medium" (Biocca, 2002, p. 102). As discussed above, enjoyment can be understood as the result of transportation into a narrative world where individuals can safely build their capacity to cope with actual problems.

Involvement or engagement with a story begins with story comprehension or construction. In consuming stories, readers or viewers run mental simulations not only of time and space but also of emotions that characters would feel (Gernsbacher, Goldsmith, & Robertson, 1992). Emotions incorporate readers' experiences into a story, which makes the story personally relevant and realistic (Oatley, 1999, 2002). Stories are as much believable as expository representations (Green & Brock, 2000; Slater, 1990; Strange & Leung, 1999; Wheeler, Green, & Brock, 1999). Comprehending a story activates immersive experiences unless a sense of "unrealness" interferes. Gilbert (1991) suggested that acceptance is part of automatic comprehension and that rejection requires more effort than acceptance. Therefore, a recipient believes a given message to be true by default until he or she detects "unrealness." Based on this suggestion, Busselle and Bilandzic (2008) proposed that not detecting "unrealness" would lead viewers to be involved with stories. Alternatively, violations of external realism (match with external reality) and narrative realism (coherence within a story) may disrupt engagement and induce a sense of "unrealness."

One main function of a story as simulated reality is to provide users with the chance to experience events in a natural way. A story with a high degree of perceived reality leads the viewer to be involved in the story, and psychological involvement with the story, in turn, functions as a predictor of enjoyment.

Hypothesis 3: Perceived reality will predict enjoyment through involvement.

The Role of Sadness in Perceiving the Reality of a Story

Emotion, often used interchangeably with affect (e.g., Pessoa, 2008), is a complex concept that comprises communication, motivation, and cognition. With regard to *communication,* emotions serve as effective means of communicating among members of society managing the complexities of social lives (Keltner, Haidt, & Shiota, 2006). Emotion also functions as an input for emotional experiences. With regard to *motivation,* an emotion drives individuals to act in a specific way; joy is to approach, and fear is to avoid (Lang, 2010). With regard to *cognition,* emotion informs individuals about their personal state and surrounding environment (Duncan & Barrett, 2007). This study will narrow the discussion of emotion to the *cognitive* component of emotion, given the goal of this study: exploring the role of emotions in perceiving reality.

The affect-as-information hypothesis (AIH) is one line of emotion research that highlights the cognitive function of emotion. According to the AIH, affect assigns value to objects of judgment (Schwarz & Clore, 2003). The rationale of the AIH is that feelings reflect and signal the state of the environment to an individual (Schwarz, 2002). For example, people in a good mood rate their lives more satisfactorily than people in a bad mood. Good moods signal safety to an individual so that the individual processes information in a more heuristic and associative way, whereas bad moods alert an individual to be vigilant, so that the individual processes information in a more systematic and analytic way.

Appraisals that generate emotions serve as information. The combination of appraisal dimensions such as certainty and control induces specific emotions such as anger, fear, and sadness (Ellsworth & Scherer, 2003; Lazarus, 1991; Ortony et al., 1988). The appraisal-tendency framework (ATF) suggests that specific emotions carry information value over subsequent judgment (Han, Lerner, & Keltner, 2007; Lerner & Keltner, 2000, 2001). Sadness, whether it is elicited by the target (i.e., integral emotion) or preexists (i.e., incidental emotion), functions as a venue for information processing and informs an individual of a problematic situation so that he or she is alerted to process information in a more systematic versus heuristic way (Lazarus, 1991; Schwarz, 2002). As such, sad people are less likely to rely on global knowledge than happy people (Bless, 2001). Sadness leads people to engage in local and item-level processing, whereas happiness and anger guide people to engage in global and category-level processing (Gasper, 2004; Gasper & Clore, 2002; Kimchi & Palmer, 1982). Therefore, local perception is related to seeing others as an individual, whereas global perception is related to seeing others as members of a group (i.e., stereotyping). In a mock trial, happy people, induced by either recalling happy moments or smiling tasks, were more likely to use stereotypes in their judgment (Bodenhausen, Kramer, & Susser, 1994). On the other hand, sad people were less influenced by stereotypes; they tended to focus on a person as an individual rather than as a member of a group.

Perceived reality of dramas mainly derives from the semantic component of reality, which refers to "the manner in which characters treat one another and the manner in which the broad themes of humans in everyday life are exemplified" (Potter, 1988, p. 28). Alternatively, perceived reality of comedies or action films mainly stems from the syntactic component of reality, which refers to the accurate presentation of situations or actions. In comedy, the manner of treating other individuals tends to be exaggerated, and human relationships are trivialized for fun. For this reason, the semantic component of reality is negatively correlated with the enjoyment of comedy (Shapiro & Chock, 2003). In the case of drama, especially tragedy, vivid portrayals of human relationships and delicate descriptions of emotional expressions are essential factors for perceived reality. Tragedy can offer hope by highlighting friendship, love, devotion, and the strength of the human spirit. The microstructure of tragedy elicits sadness and, ultimately, enjoyment (de Wied, Zillmann, & Ordman, 1994). The sadness induced by a tragic film may not devolve into hopelessness because the viewers can focus on the bright side of human nature in the specific microstructure of tragedy. Consistent with this argument, people's enjoyment of sad films is closely related to their level of empathic concern (Oliver, 1993; Oliver et al., 2000). People who demonstrate high levels of empathic sensitivity report greater enjoyment of sad films.

Overall, feeling sad can function as a means of gathering information because it helps individuals perceive their reality through systematic, analytic, and data-driven information processing. In the context of enjoyment of tragedy, the information-processing style of sadness (i.e., analytic, systematic, and data-driven processing) is particularly important because the perceived reality of a sad story mainly derives from the detailed description of characters and their relationships. Thus, the detailed description of characters and their relationships is a critical factor in determining the level of perceived reality in tragedy. Generally, the theme of tragedy is not justice and revenge but love and tenderness. Therefore, in tragedy, characters should be seen as individuals (versus members of a group) so that characters' delicate facial expressions are observed without being stereotyped. Sadness, as a source of information, is likely to lead people to engage in detecting delicate relationships among characters. That is, sadness induced by a sad story is likely to lead readers or viewers to perceive the contents of tragedy to be more realistic.

Hypothesis 4: Sadness will predict perceived reality, not vice versa.

Alternatively, sadness may decrease perceived reality. Since sadness tends to alert individuals to process information in a more systematic and analytic way, sad individuals may become more sensitive or prone to notice flaws that may be contained in depicted relationships, which can then lead viewers to detect unrealness. Therefore, an alternative hypothesis is presented as followed:

Alternative hypothesis 4: Sadness will predict decreased perceived reality.

Method

Movie Selection and Participants

We acquired the data from a study that applied the Entertainment-Education paradigm to a movie depicting people suffering from schizophrenia (Ritterfeld & Jin, 2006). In the study, a film was used to examine the effects of Entertainment-Education strategy on knowledge acquisition about mental illness and stigma reduction. The selected movie was *Angel Baby* directed by Michael Rymer. It is a tragic story about a woman and a man who suffer from schizophrenia. The main protagonists meet at a mental health clinic, fall in love with each other, marry, and take the risk of having a baby. The woman dies on a surgery bed after delivering their baby. The ending scene captures the sadness of the man who has lost his wife. He stands on a bridge railing and moves his arms like flapping wings. This symbolic movement implies that he commits suicide to be with his dead wife. In addition to the film, participants watched trailers providing factual information about the disease the main characters suffered. In the original study, 165 participants, mostly female college students who had not previously watched the movie, were recruited on the West Coast of the United States.

Measures

Sadness was measured by two items (i.e., "Kate's story made me cry," "Harry's story made me cry"), r (164) = .79, $p < .01$. This measure is a conservative test for *sadness* because all crying individuals must be sad, but not all sad individuals cry. *Perceived reality* was measured by four items:

(1) "The story is pure fiction. It could not have happened that way" (reverse coded);
(2) "The movie was not realistic" (reverse coded);
(3) "I am convinced that Kate and Harry's story could really happen;" and
(4) "The story of Kate and Harry felt so real" (Cronbach's α = .77).

Involvement was measured by four items:

(1) "I had the sense of being pulled right into the story";
(2) "I stayed 'outside' the story. It did not interest me" (reversed coded);
(3) "I wasn't involved in the movie at all" (reversed coded); and
(4) "This movie was very involving" (Cronbach's α = .81).

Enjoyment was measured by two items:

(1) "The movie was very entertaining;" and
(2) "I very much enjoyed watching the movie," r (164) = .58, $p < .01$.

All items were measured by 5-point Likert scales anchored by 1 = *completely disagree* to 5 = *completely agree*.

Results

Primary Analysis

Table 1 presents descriptive statistics and correlations. The predictor (sadness), the mediators (perceived reality and involvement), and the criterion variable (enjoyment) correlated with one another significantly ($p < .01$, $N = 165$). Confirmatory factor analysis was performed with four constructs: sadness, perceived reality, involvement, and enjoyment (LISREL, Student Version 8.8). The confirmatory factor model with the four variables was an excellent fit to the data, χ^2 (34, $N = 165$) = 26.89, $p = .80$, root mean square error of approximation (RMSEA) = .00. We compared the four-factor model (sadness, perceived reality,

Table 1. Enjoyment-of-Tragedy Variables: Means, standard deviations, and correlations of the variables

|	Sadness	Perceived reality	Involvement	Enjoyment
Sadness	1.00			
Perceived Reality	.24**	1.00		
Involvement	.38**	.60**	1.00	
Enjoyment	.24**	.50**	.67**	1.00
Mean	2.78	3.69	3.75	3.30
Standard deviation	1.25	0.89	0.93	1.09

Note. **$p < .01$.

involvement, and enjoyment) with the three-factor model (sadness, perceived reality, and enjoyment). The four items of involvement were a part of enjoyment. The three-factor model was a good fit, χ^2 (37, $N = 165$) = 34.99, $p = .56$, RMSEA = .00, but the four-factor model was a better model fit than the three-factor model. When involvement was separated from enjoyment, the chi-square became smaller (χ^2: 34.99 → 26.89), with a higher p value (.56 → .80).

Hypothesis 1 predicted that perceived reality would fully mediate the path from sadness to object-referent enjoyment while partially mediating the path from sadness to a self-referent enjoyment. Two path models were constructed using multiple regression analyses. As predicted, perceived reality fully mediated object-referent enjoyment. When regressing object-referent enjoyment on both sadness and perceived reality, the relationship between sadness and object-referent enjoyment no longer remained significant ($\beta = .17$ $p = .03 \rightarrow \beta = .05$, $p = .44$), Sobel test: 2.86, $p = .004$. Following Preacher and Hayes' (2008) recommendation and bootstrapping procedure, a more rigorous mediation analysis was conducted. A bootstrapping mediation analysis demonstrated an almost identical result ($\beta = .18$, $p = .02 \rightarrow \beta = .08$, $p = .31$) with lower confidence limit = .03 and upper confidence limit = .18 (see Figure 2). On the other hand, perceived reality partially mediated the effect of sadness on self-referent enjoyment. When regressing self-referent enjoyment on both sadness and perceived reality, the significance of the relationship between sadness and self-referent enjoyment decreased ($\beta = .25$, $p = .001 \rightarrow$ $\beta = .16$, $p = .03$), Sobel test = 2.69, $p = .01$. A bootstrapping mediation analysis demonstrated an almost identical result ($\beta = .24$, $p = .001 \rightarrow \beta = .17$, $p = .02$) with lower confidence limit = .02 and upper confidence limit = .12. The object-referent path model explained 24.5% of the variance in the enjoyment of sadness through perceived reality (adjusted $R^2 = .25$). At the same time, the self-referent path model explained 19.2% of the variance in the enjoyment of sadness through perceived reality (adjusted $R^2 = .19$). This pattern was not changed after controlling for the gender variable. Therefore, Hypothesis 1 was supported.

Hypothesis 2 predicted that sadness would predict self-referent enjoyment more significantly with a greater magnitude than object-referent enjoyment. Regressions were conducted with two items as criterion variables: "I very much enjoyed watching the movie" (self-referent item)
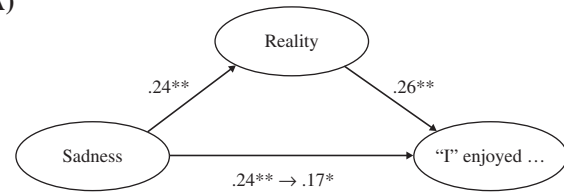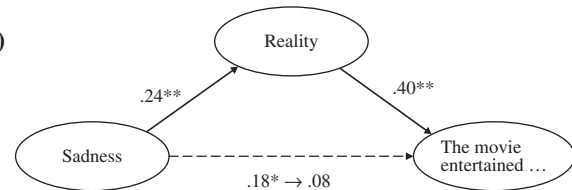

Figure 2. Bootstrapping mediation analysis: sadness to self-referent enjoyment (A) and object-referent enjoyment (B). *$p < .05$, **$p < .01$, ***$p < .001$.

and "The movie was very entertaining" (object-referent item). Sadness predicted the self-referent item more significantly ($\beta = .25$, $p = .001$) than the object-referent item ($\beta = .17$, $p = .03$). The magnitude of prediction was greater for the self-referent item (adjusted $R^2 = .06$) than the object-referent item (adjusted $R^2 = .02$). Therefore, Hypothesis 2 was supported.

Hypothesis 3 proposed that perceived reality would predict enjoyment through involvement. Hypothesis 4 proposed that sadness would predict perceived reality, not vice versa. A structural equation modeling (SEM) with latent variables (LISREL 8.8) was used to test the hypotheses. The structural equations (maximum likelihood) confirmed the prediction across four variables: sadness → perceived reality → involvement → enjoyment. Sadness predicted perceived reality ($\beta = .37$, $t = 3.54$, $p < .001$, $R^2 = .14$). Perceived reality predicted involvement ($\beta = .68$, $t = 5.22$, $p < .001$, $R^2 = .17$). Involvement predicted enjoyment ($\beta = .89$, $t = 4.29$, $p < .001$, $R^2 = .81$) (see Figure 3).

The goodness of the fit of the model was assessed using the chi-square test, standardized root-mean-square residual (SRMR; desired value $\leq .08$), RMSEA (desired value $\leq .06$), and comparative fit index (CFI; desired value $\geq .95$) (Hu & Bentler, 1999). The theoretical model was a good fit to the data, χ^2 (34, $N = 165$) = 26.89, $p = .79$. SRMR
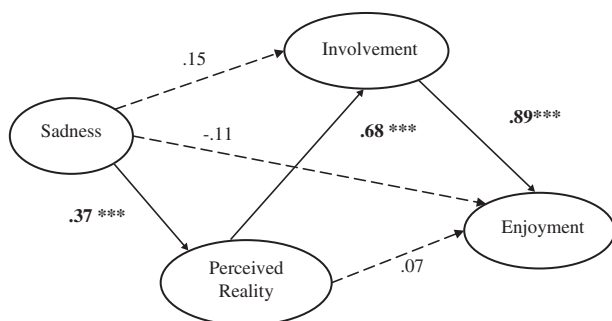
Figure 3. Structural equation modeling: Sadness → Perceived reality → Involvement → Enjoyment. Coefficients are standardized, and *t* values are in parentheses. Chi-square = 26.89, *p* value = .79, root mean square error of approximation (RMSEA) = .000. R^2 for Perceived Reality = .14, R^2 for Involvement = .17, R^2 for Enjoyment = .81. ***p < .001.

Table 2. Three possible path model sets for the enjoyment of sad films

I. Sadness set
Model S1: Sadness → Perceived Reality → Involvement → Enjoyment
Model S2: Sadness → Involvement → Perceived Reality → Enjoyment

II. Reality set
Model R1: Perceived Reality → Sadness → Involvement → Enjoyment
Model R2: Perceived Reality → Involvement → Sadness → Enjoyment

III. Involvement set
Model I1: Involvement → Sadness → Perceived Reality → Enjoyment
Model I2: Involvement → Perceived Reality → Sadness → Enjoyment

and RMSEA values were less than cutoff criteria, SRMR = .04, RMSEA = 0.0, 90% CI [0.0, 0.04]. The CFI value (1.00) was larger than the cutoff criteria. Thus, Hypotheses 3 and 4 were supported, whereas alternative Hypothesis 4 was not.

Post Hoc Analysis

We compared the theoretical model with alternative models that excluded direct paths linking sadness to involvement and enjoyment and perceived reality to enjoyment. In addition to excluding these direct paths, the sequences of variables were also modified to test the validity of sadness as a predictor. We compared three sets of models with different orders of predictors and mediators.

The first set (sadness set: Models S1 and S2) put sadness as a predictor that was mediated by perceived reality and involvement to enjoyment. In Model S1, the order of mediation was: Sadness → Perceived Reality → Involvement → Enjoyment. In Model S2, the order of mediators was reversed: Sadness → Involvement → Perceived Reality → Enjoyment. The second set (reality set: Models R1 and R2) put perceived reality as a predictor which was mediated by sadness and involvement to enjoyment. In model R1, the order of mediation was Perceived Reality → Sadness → Involvement → Enjoyment. In model R2, the order of mediators was reversed: Perceived Reality → Involvement → Sadness → Enjoyment. The third set (involvement set: Models I1 and I2) put involvement as a predictor which was mediated by sadness and perceived reality to enjoyment. In model I1, the order of mediation was Involvement → Sadness → Perceived Reality → Enjoyment. In model I2, the order of mediators was reversed: Involvement → Perceived Reality → Sadness → Enjoyment (see Table 2).

Among six alternative models, Model S1 of the sadness set was superior to the other five models. It was the only

well-fitting model, χ^2 (37, N = 165) = 31.57, p = .72. The overall model fit was good, with CFI = 1.00, SRMR = .05, RMSEA = 0.00. Also, Model S1 was the only alternative model whose chi-square is not significantly different from the original model. When the order of mediators was changed in Model S2 (involvement → perceived reality), the chi-square became significant, χ^2 (37, N = 165) = 55.84, p = .02, indicating that the applied model was significantly different from the sample data.

Alternative models in the other two sets in which sadness was not a predictor were also tested. The results indicated that the fit of alternative models of the reality set (perceived reality as a predictor) and the involvement set (involvement as a predictor) was very poor. The chi-squares of the remaining models were very big and significant. Also, the chi-square differences between the original model and the four models were significant. When sadness was a predictor, chi-squares were smaller than the other two sets in which perceived reality and involvement were predictors, respectively. Chi-squares of Models S1 and S2 (sadness set) were 31.57 and 55.84, respectively, whereas the chi-squares of Models R1 and R2 (reality set) were 81.27 and 100.06, respectively. The chi-squares of Models I1 and I2 (involvement set) were 125.28 and 112.04, respectively. Therefore, Hypotheses 3 and 4 were supported.

Discussion

Summary of Major Findings

Sadness in the study of tragedy has been treated as the traditional outcome of story engagement. Thus, the enjoyment-of-tragedy paradox mainly derives from the emphasis on the outcome of emotion generation. The metaemotion approach (e.g., Oliver, 1993) provides a solution for how people handle negative emotions as an outcome of media consumption.

Nevertheless, this approach does not draw the whole picture of the enjoyment-of-tragedy paradox. There still remains a question about the role of sadness in the complex process of human psychology in relation to entertainment media consumption. This study fills this gap by focusing on sadness as a mental process in comprehending a story, not as an outcome of story engagement. Emotion-generative processes bear an input side as a source of information (Schwarz & Clore, 2003) or a form of cognition (Duncan & Barrett, 2007). From this perspective, tragedy can be enjoyable because sadness involves people in the story. Stories compelling enough to elicit sadness are realistic and involving. Ultimately, people do not enjoy others' tragedy but rather a compelling story that they deem highly realistic.

Results from this study demonstrate that people enjoy tragedy through two mediators: perceived reality and involvement (Figure 3). Sadness enhances perceived reality and increases a sense of involvement, leading viewers to enjoy the sad film. When perceived reality was set to predict sadness, the data did not support the model. By ruling out various alternative explanations, this study presented a sequential path between sadness and perceived reality. There have been solid theoretical grounds that sadness plays a role in enhancing perceived reality of sad stories. Sadness signals uncertainty to an individual so that the individual can understand the nature of the problem through systematic, analytic, and data-driven information processing. This data-driven information-processing tendency of sad individuals typically leads viewers to perceive other people as individuals rather than as members of a group. In the context of the enjoyment of tragedy, the information-processing style of sadness is particularly important because perceived reality of a sad story mainly derives from the detailed and delicate descriptions of characters and the nature of their relationships.

This study also contributes to a better understanding of possible functions of sadness as information. An alternative hypothesis has been presented that sad individuals might become prone to notice violations of reality because they are more vigilant than happy individuals. The results in this study suggest that this may not be the case. The more the viewers experienced sadness, the more they perceived reality from the film. This finding can be explained by the default mode of information processing whereby humans perceive the world as real, until something unreal disrupts their perception. However, the result from this study cannot be used as evidence for causal relationships among sadness, perceived reality, involvement, and enjoyment because this study did not employ an experimental design. Further experimental study is required to confirm the possible causal relationship among sadness, perceived reality, involvement, and enjoyment.

This study distinguished self-referent enjoyment from object-referent enjoyment. This conceptual distinction becomes salient in tragedy because a sad story is not objectively entertaining. As expected, perceived reality fully mediated the entertaining value of mediated contents, whereas it only partially mediated subjective evaluation of the mediated content. Enjoyment is a fundamentally subjective experience independent of objective valence of mediated contents.

Limitations

This study has some limitations. First, 12% of participants were exposed to a trailer prior to watching the movie, and 76% of participants were exposed to the trailer after watching the movie, whereas 12% of participants (control group) were not exposed to the trailer. The trailers were designed to provide factual information about schizophrenia, the mental illness from which the main characters in the movie suffer. We cannot exclude the possibility that preexposure to the trailer might have influenced the relationships among variables such as sadness, perceived reality, involvement, and enjoyment, although there was no statistically significant difference between the trailer and no-trailer conditions with regard to these main variables: sadness, $F(1, 163) = 2.76$, $p = .10 > .05$, n.s.; perceived reality, $F(1, 163) = 1.96$, $p = .16 > .05$, n.s.; involvement, $F(1, 162) = .15$, $p = .70 > .05$, n.s.; enjoyment, $F(1, 162) = 3.92$, $p = .05$, n.s.. Despite the nonsignificant effect of educational trailers on the main variables, preexposure to the educational trailers might have had both positive and negative impacts on the interrelationships among the variables. Because the educational trailer helps viewers reduce stigma, it might minimize the possible effects of stigma so that we could investigate relatively "pure" impacts of sadness on enjoyment. On the other hand, it is also possible that the educational trailer was a confounding variable for the enjoyment of tragedy. Therefore, there is a possibility that the proposed model in this study could be supported by the data because of the educational trailer. The control group, which was not exposed to the trailer, comprised only 20 subjects (12%). With four variables to be analyzed, 20 subjects could not provide enough power for analysis. To address this question, future research is required that uses various sad films with and without trailer conditions. Second, the participants of this study were mostly female college students. Given that females and males have different behaviors in crying, care should be taken when applying findings in this study to male populations. Third, the measures in this study might not fully reflect the concept we discussed because some concepts were measured with a limited number of items. For example, self-referent enjoyment and other-referent enjoyment were measured by two single-item measures. In addition, the four items used to measure perceived reality might not fully represent this concept. Items that capture the semantic aspects of reality could improve precision in measuring perceived reality.

Suggestions for Future Research

This study empirically demonstrates that sadness functions as a means of perceiving reality. This unique function of sadness may explain why sad films induce empathic responses among viewers in terms of information processing. Sadness

induces viewers to focus on characters as individuals rather than as members of a group, as discussed above (Schwarz, 2002). This difference is significant in terms of social cognition. When people perceive others as a member of a group, they inevitably stereotype them based on previously held biases. In the case of the films used in this study, if the feeling of sadness were absent, characters could easily be portrayed as members of the stigmatized mentally ill population versus suffering individuals. If a film that portrayed the stigmatized group adopted the genre of comedy instead of tragedy, the film might contribute to strengthening the bias. That is why comedy is often used for mocking other group members. An emotion-as-information approach can explain why horror films that induce fear may not elicit empathic responses for victims. Fear reflects low certainty and situational control, whereas anger reflects high certainty and individual control. As such, people with a fearful disposition view future events (e.g., estimating the number of annual fatalities) more pessimistically than people with an angry disposition (Lerner & Keltner, 2000, 2001). Like sadness, fear signals problems and uncertainty to an individual so that the individual processes information in a more systematic and analytic way. The difference between sadness and fear lies in the nature of loss. Fear signals that loss is imminent, whereas sadness signals that loss is irreversible. Accordingly, fearful people may focus on situations to avoid threats, whereas sad people may focus on characters. Therefore, the reality of horror movies may come from describing threatening situations (i.e., syntactic component of reality), and fear may enhance the perceived reality of horror films by guiding viewers to process situational information more closely. Future research is required to investigate whether sadness and fear function differently in perceiving the reality of tragedy. Taking this one step further, it is worth investigating whether other specific emotions such as anger, surprise, happiness, and disgust function in perceiving the reality of entertaining genres such as action, suspense, and comedy. This line of research could be a great addition to entertainment-education since emotional experiences are critical factors in entertainment-education. If sadness and other emotions have different functions in terms of information processing, care should be taken regarding which emotion should be induced for the purpose of attitude change via entertainment media consumption.

Concluding Remarks

Understanding reality and enjoyment of tragedy requires various approaches. This study provides an additional perspective in understanding enjoyment of tragic media content by empirically demonstrating that sadness functions as a means of perceiving reality. To our best knowledge, this study is the first attempt to understand emotion as information, in the context of enjoyment of tragedy. This approach should enrich media enjoyment research since feelings serve as sources of information that guides our behaviors.

References

Ahn, D. (2011). Toward resolving the paradoxical enjoyment of tragic drama. *Journal of Media Economics and Culture, 9*(4), 181–222.

Biocca, F. (2002). The evolution of interactive media: Toward "being there" in nonlinear narrative worlds. In M. C. Green, J. J. Strange, & T. C. Brock (Eds.), *Narrative impact: Social and cognitive foundations* (pp. 97–129). Mahwah, NJ: Erlbaum.

Bless, H. (2001). The relation between mood and the use of general knowledge structures. In L. L. Martin & G. L. Clore (Eds.), *Mood and social cognition: Contrasting theories* (pp. 9–29). Mahwah, NJ: Erlbaum.

Bodenhausen, G. V., Kramer, G. P., & Susser, K. (1994). Happiness and stereotypic thinking in social judgment. *Journal of Personality and Social Psychology, 66*(4), 621–632.

Bruner, J. (1991). The narrative construction of reality. *Critical Inquiry, 18*(1), 1–21.

Bruner, J. S. (1986). *Actual minds, possible worlds*. Boston, MA: Harvard University Press.

Busselle, R., & Bilandzic, H. (2008). Fictionality and perceived realism in experiencing stories: A model of narrative comprehension and engagement. *Communication Theory, 18*(2), 255–280.

de Wied, M., Zillmann, D., & Ordman, V. (1994). The role of empathic distress in the enjoyment of cinematic tragedy. *Poetics, 23*, 91–106.

Denham, B. E. (2004). Toward an explication of media enjoyment: The synergy of social norms, viewing situations, and program content. *Communication Theory, 14*(4), 370–387.

Duncan, S., & Barrett, L. F. (2007). Affect is a form of cognition: A neurobiological analysis. *Cognition & Emotion, 21*(6), 1184–1211.

Ellsworth, P. C., & Scherer, K. R. (2003). Appraisal processes in emotion. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 572–595). New York, NY: Oxford University Press.

Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300–319.

Gasper, K. (2004). Do you see what I see? Affect and visual information processing. *Cognition & Emotion, 18*(3), 405–421.

Gasper, K., & Clore, G. L. (2002). Attending to the big picture: Mood and global versus local processing of visual information. *Psychological Science, 13*(1), 34–40.

Gernsbacher, M. A., Goldsmith, H. H., & Robertson, R. R. W. (1992). Do readers mentally represent characters' emotional states? *Cognition & Emotion, 6*(2), 89–111.

Gerrig, R. J. (1993). *Experiencing narrative worlds: On the psychological activities of reading*. New Haven, CT: Yale University Press.

Gilbert, D. T. (1991). How mental systems believe. *American Psychologist, 46*(2), 107–119.

Goldenberg, J. L., Pyszczynski, T., & Johnson, K. D. (1999). The appeal of tragedy: A terror management perspective. *Media Psychology, 1*, 313–329.

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology, 79*(5), 701–721.

Green, M. C., & Brock, T. C. (2002). In the mind's eye: Transportation-imagery model of narrative persuasion. In M. C. Green, J. J. Strange, & T. C. Brock (Eds.), *Narrative impact: Social and cognitive foundations* (pp. 315–341). Mahwah, NJ: Erlbaum.

Green, M. C., Brock, T. C., & Kaufman, G. E. (2004). Understanding media enjoyment: The role of transportation into narrative worlds. *Communication Theory, 14*(4), 311–327.

Han, S., Lerner, J. S., & Keltner, D. (2007). Feelings and consumer decision making: The appraisal-tendency framework. *Journal of Consumer Psychology, 17*(3), 158–168.

Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55.

Keltner, D., Haidt, J., & Shiota, M. (2006). Social functionalism and the evolution of emotions. In M. Schaller, J. A. Simpson, & D. T. Kenrick (Eds.), *Evolution and social psychology* (pp. 115–142). New York, NY: Psychology Press.

Kimchi, R., & Palmer, S. E. (1982). Form and texture in hierarchically constructed patterns. *Journal of Experimental Psychology: Human Perception and Performance, 8*(4), 521–535.

Knobloch-Westerwick, S. (2006). Mood management theory, evidence, and advancements. In J. Bryant & P. Vorderer (Eds.), *Psychology of entertainment* (pp. 239–254). Mahwah, NJ: Erlbaum.

Lang, P. (2010). Emotion and motivation: Toward consensus definitions and a common research purpose. *Emotion Review, 2*, 229–233.

Lazarus, R. S. (1991). *Emotion and adaptation*. New York, NY: Oxford University Press.

Lerner, J. S., & Keltner, D. (2000). Beyond valence: Toward a model of emotion-specific influences on judgement and choice. *Cognition & Emotion, 14*(4), 473–493.

Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of Personality and Social Psychology, 81*(1), 146–159.

Mares, M. L., & Cantor, J. (1992). Elderly viewers' responses to televised portrayals of old age: Empathy and mood management versus social comparison. *Communication Research, 19*, 459.

Mills, J. (1993). The appeal of tragedy: An attitude interpretation. *Basic and Applied Social Psychology, 14*(3), 255–271.

Nabi, R. L., & Krcmar, M. (2004). Conceptualizing media enjoyment as attitude: Implications for mass media effects research. *Communication Theory, 14*(4), 288–310.

Oatley, K. (1999). Why fiction may be twice as true as fact: Fiction as cognitive and emotional simulation. *Review of General Psychology, 3*, 101–117.

Oatley, K. (2002). Emotions and the story worlds of fiction. In M. C. Green, J. J. Strange, & T. C. Brock (Eds.), *Narrative impact: Social and cognitive foundations* (pp. 39–70). Mahwah, NJ: Erlbaum.

Oliver, M. B. (1993). Exploring the paradox of the enjoyment of sad films. *Human Communication Research, 19*(3), 315–342.

Oliver, M. B. (2003). Mood management and selective exposure. In J. Bryant & D. Roskos-Ewoldsen (Eds.), *Communication and emotion* (pp. 85–106). Mahwah, NJ: Erlbaum.

Oliver, M. B., & Nabi, R. L. (2004). Exploring the concept of media enjoyment: An introduction to the special issue. *Communication Theory, 14*(4), 285–287.

Oliver, M. B., Weaver, J. B., & Sargent, S. L. (2000). An examination of factors related to sex differences in enjoyment of sad films. *Journal of Broadcasting and Electronic Media, 44*(2), 282–300.

Ortony, A., Clore, G. L., & Collins, A. (1988). *The cognitive structure of emotions*. New York, NY: Cambridge University Press.

Park, N., Lee, K., Jin, S. A., & Kang, S. (2010). Effects of pre-game stories on feelings of presence and evaluation of computer games. *International Journal of Human-Computer Studies, 68*, 822–833.

Pessoa, L. (2008). On the relationship between emotion and cognition. *Nature Reviews Neuroscience, 9*, 148–158.

Potter, W. J. (1988). Perceived reality in television effects research. *Journal of Broadcasting and Electronic Media, 32*(1), 23–41.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891.

Raney, A. A. (2004). Expanding disposition theory: Reconsidering character liking, moral evaluations, and enjoyment. *Communication Theory, 14*(4), 348–369.

Ritterfeld, U., & Jin, S. (2006). Addressing media stigma for people experiencing mental illness using an entertainment-education strategy. *Journal of Health Psychology, 11*(2), 247–267.

Schwarz, N. (2002). Situated cognition and the wisdom of feelings: Cognitive tuning. In L. F. Barrett & P. Salovey (Eds.), *The wisdom in feelings* (pp. 144–166). New York, NY: Guilford Press.

Schwarz, N., & Clore, G. L. (2003). Mood as information: 20 years later. *Psychological Inquiry, 14*(3&4), 296–303.

Shapiro, M. A., & Chock, T. M. (2003). Psychological processes in perceiving reality. *Media Psychology, 5*, 163–198.

Sherry, J. L. (2004). Flow and media enjoyment. *Communication Theory, 14*(4), 328–347.

Slater, M. D. (1990). Processing social information in messages: Social group familiarity, fiction versus nonfiction, and subsequent beliefs. *Communication Research, 17*(3), 327.

Slater, M. D., & Rouner, D. (2002). Entertainment-education and elaboration likelihood: Understanding the processing of narrative persuasion. *Communication Theory, 12*(2), 173–191.

Strange, J. J., & Leung, C. C. (1999). How anecdotal accounts in news and in fiction can influence judgments of a social problem's urgency, causes, and cures. *Personality and Social Psychology Bulletin, 25*(4), 436.

Vorderer, P., Klimmt, C., & Ritterfeld, U. (2004). Enjoyment: At the heart of media entertainment. *Communication Theory, 14*(4), 388–408.

Vorderer, P., Steen, F. F., & Chan, E. (2006). Motivation. In J. Bryant & P. Vorderer (Eds.), *Psychology of entertainment* (pp. 405–422). Mahwah, NJ: Erlbaum.

Wheeler, S. C., Green, M. C., & Brock, T. C. (1999). Fictional narratives change beliefs: Replications of Prentice, Gerrig, and Bailiffs (1997) with mixed corroboration. *Psychonomic Bulletin & Review, 6*(1), 136–141.

Wirth, W. (2006). Involvement. In J. Bryant & P. Vorderer (Eds.), *Psychology of entertainment* (pp. 199–213). Mahwah, NJ: Erlbaum.

Dohyun Ahn (PhD, University of Alabama) is a senior researcher at the Department of Interaction Science at Sungkyunkwan University (Korea). His research interests center on the role of media in improving cognitive abilities and mental health, and the role of communication in changing attitudes and adopting new ideas.

Seung-A Annie Jin (PhD, University of Southern California) is an assistant professor in the Department of Communication at Boston College. Her research interests include new media, communication technologies, computer-mediated communication (CMC), media psychology, and health communication.

Ute Ritterfeld (PhD, Technical University Berlin, 1995) is heading the Department of Language and Communication of the Technical University Dortmund. Her expertise includes applications for health and life style changes especially tailored towards seniors and individuals with special needs, and tools to motivate and facilitate deeper learning in all age groups.

Seung-A Annie Jin
Department of Communication
Boston College
140 Commonwealth Ave
Maloney Hall 544
Chestnut Hill, MA 02467
USA
Tel. +1 617 552-0939
Fax +1 617 552-2286
E-mail seunga.jin@bc.edu