Spoilers as Self-Protection: Investigating the Influence of Empathic Distress and Concern for the Self on Spoiler Selection

SARAH E. BROOKES♦
State University of New York at Geneseo, USA

JUDITH E. ROSENBAUM
University of Maine, USA

MORGAN E. ELLITHORPE
Michigan State University, USA

Despite the commonly held belief that spoilers detract from the narrative experience, research results have been equivocal. In fact, some research has indicated that spoilers can reduce para-social breakup distress, pointing to the potential of spoilers to serve a protective function and help people manage their moods. A naturalistic experiment examined how concern for the characters and the self might impact the likelihood of selecting spoilers. Graphic warnings were provided before participants viewed a suspenseful television episode, and they were also given the opportunity to read either a review with spoilers or a review without spoilers before the narrative climax. Results indicate that those who experienced greater concern for the characters and subsequently greater self-concern were more likely to choose the spoiled review. Interestingly, their exposure to spoilers did not affect their enjoyment or suspense at the conclusion of the episode. This suggests that the desire to avoid emotional distress plays a role in spoiler selection: People may seek out spoilers to protect themselves from negative feelings.

Keywords: spoiler selection, empathic distress, enjoyment, graphic warning, naturalistic experiment

As anyone who has looked online for information about their favorite television show knows, spoiler content and accompanying spoiler warnings are everywhere. While the proliferation of websites dedicated to sharing spoiled content indicates that many individuals actively seek out spoilers, most people still share the intuitive understanding that spoilers can decrease enjoyment of entertainment narratives and are thus something to be avoided (Mecklenburg, 2021; Shevenock, 2020).

Sarah E. Brookes: brookes@geneseo.edu
Judith E. Rosenbaum: judith.rosenbaumandre@maine.edu
Morgan E. Ellithorpe: mellitho@udel.edu
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However, despite the dedication some people show when it comes to avoiding spoilers, current research is divided on whether people's spoiler-averse instincts are correct. While some work has supported excitation transfer theory (i.e., narrative uncertainty creates arousal that leads to narrative enjoyment when that uncertainty is ultimately resolved; Zillmann, 1983; Zillmann, Hay, & Bryant, 1975) by finding that spoilers do ruin enjoyment (e.g., Rosenbaum & Johnson, 2016), other work has produced contradictory results, demonstrating instead that spoilers increase enjoyment (e.g., Leavitt & Christenfeld, 2011, 2013). Moreover, several factors, such as specific personality traits and processing fluency, have been identified as impacting the relationship between spoilers and enjoyment (Ellithorpe & Brookes, 2018; Leavitt & Christenfeld, 2013; Rosenbaum & Johnson, 2016). Recent research has also shown that, under specific circumstances (e.g., among horror fans with a high need for affect), certain kinds of spoilers can increase enjoyment (Brookes, Cohen, Ewoldsen, & Velez, 2012; Johnson, Udvardi, Eden, & Rosenbaum, 2020; Leavitt & Christenfeld, 2011). Thus, the relationship between spoilers and enjoyment is complex and not always negative.

Spoilers, however, also have the potential to reduce the emotional distress that can result from consuming media content and promote positive moods. Ellithorpe and Brookes (2018) found that exposure to spoilers predicted a reduction in para-social breakup distress after the series finale of a long-running television program, indicating that spoilers may serve an emotionally protective function for their consumers. Subsequently, it is possible that people seek out spoilers to reduce expected emotional distress. This spoiler seeking may especially be the case for entertainment genres that have the potential to produce negative affect, such as horror and suspense, as well as narratives that present the potential for emotional distress (such as when a liked character is in danger). The present study uses graphic warnings to create an expectation of potential emotional distress and then assesses whether people opt for a spoiler to minimize emotional discomfort. Choosing to be spoiled or not under these circumstances may impact whether those spoilers might then increase the enjoyment of a suspenseful narrative.

This study will thus provide a better understanding of spoiler choice. Understanding this choice may help explain individual differences in spoiler-seeking and spoiler-avoidance behaviors as well as elucidate some of the conflicting findings in the literature regarding spoilers' impact on narrative outcomes such as enjoyment and suspense. This increased knowledge could also have larger societal implications, in that a clearer understanding of spoilers' impact on narrative experience could potentially shift the current negative cultural perception of spoilers. The present study examines spoiler choice and its effect on enjoyment and suspense through a naturalistic experimental design that examines whether one function of spoilers might be to serve as a form of self-protection.

Spoilers, Emotional Distress, Enjoyment, and Reactance

Spoilers, defined as "premature and undesired information about how a narrative's arc will conclude" (Johnson & Rosenbaum, 2015, p. 1069), have a complex relationship with mood and narrative enjoyment. Early spoiler research started from the premise that spoilers have a negative impact on people's ability to enjoy the narrative (cf. Rosenbaum & Johnson, 2016). Considering the negativity commonly associated with spoilers, spoilers could be argued to cause negative emotions that viewers would want to avoid (cf. mood management theory; Knobloch-Westerwick, 2006). However, as Hills (2012) and Perks and

McElrath-Hart (2018) pointed out, it is also possible that people seek spoilers to avoid the negative emotions associated with an undesired narrative outcome. The role that spoilers play in people's management of their emotional states therefore remains unclear.

This need for clarity is echoed by recent work on the impact (or lack thereof) of spoilers on people's enjoyment of media content. While some work has unequivocally demonstrated the positive impact that spoilers have on enjoyment (Leavitt & Christenfeld, 2011, 2013), other studies have shown that spoilers' influence on enjoyment is negative or nonexistent (e.g., Johnson & Rosenbaum, 2015). In addition, various personality traits, the genre in question, the nature and placement of the spoiler, and processing fluency all play a role in mediating or moderating the relationship between enjoyment and spoilers (Ellithorpe & Brookes, 2018; Johnson & Rosenbaum, 2018; Johnson et al., 2020; Leavitt & Christenfeld, 2013; Levine, Betzner, & Autry, 2016; Rosenbaum & Johnson, 2016; Topolinksi, 2014; Yan & Tsang, 2016). An important variable to consider when discussing spoilers, and the main reason for the abundance of online spoiler warnings, is reactance. This psychological construct refers to the negative emotions people experience when they perceive a loss of freedom (Reinhart, Marshall, Feeley, & Tutzauer, 2007). Logic dictates that presenting viewers with unwanted spoilers can induce reactance; being presented with a story's outcome without having a choice in the matter can lead viewers to experience a perceived loss of freedom. This loss produces negative emotion, which per mood management theory, is something people will want to avoid. Yet, research has produced mixed results about the relationship between spoilers, reactance, and the subsequent impact on enjoyment (Johnson & Rosenbaum, 2018; Johnson et al., 2020).

However, it is important to consider that in these previous studies, participants' reactance was measured as a dependent variable that was assessed after forced exposure to an (un)spoiled story. Whether reactance plays a role in the narrative experience if people are given a choice to spoil themselves is questionable. Only one study to date has examined what happens when people are given a chance to spoil themselves (Kryston et al., 2022). This study showed that content-related variables as well as personality traits played a role in people's decision to read a spoiled review. These findings suggest that the reactance that has been thought to negatively impact how spoilers influence enjoyment could be the result of forced spoiler exposure combined with people's (mistaken) belief that knowing the outcome of a story would negatively impact their enjoyment (Yan & Tsang, 2016).

At the same time, theorizing about a narrative resolution is common practice among viewers, especially fans, who regularly share their ideas about future events online (Gray & Mittell, 2007) and some of whom will intentionally seek online spoilers (Jenkins, 2006). In other words, despite people's natural inclination to avoid spoilers and the finding that spoilers can increase reactance, people may decide to spoil themselves for various reasons, including a desire to protect "their emotional attachments" (Hills, 2012, p. 115). This desire to safeguard one's emotional state is especially interesting and should be considered when examining reasons behind spoiler selection. Research, therefore, should consider the complexities involved in predicting when people choose to be spoiled, the role played by one's emotional state, as well as when and how those spoilers will impact enjoyment. This study thus aims to further examine the impact of spoiler selection when viewers are given a choice to self-spoil, removing the possible influence of the perceived loss of freedom commonly associated with reactance.

Graphic Warnings and Concern for the Self and Characters

Commonplace in media content, graphic warnings are generally seen as a method for alerting viewers to potentially distressing content. Research into graphic warnings for suspenseful and frightening narrative developments, as well as work on trigger warnings that preceded disturbing images, found that these kinds of notifications increased negative affect, anxiety, concerns about one's risk of suffering considerable emotional harm in the case of trauma, and an overall concern for the self (Bellet, Payton, & McNally, 2018; Bridgland, Green, Oulton, & Takarangi, 2019; de Wied, Hoffman, & Roskos-Ewoldsen, 1997; see also Cantor, Ziemke, & Sparks, 1984).

From a spoiler research perspective, graphic warnings are particularly interesting as the information they provide about impending disturbing content could induce anticipation about a narrative outcome. This anticipation might in turn lead people to select spoilers in an attempt to avoid being blindsided by a narrative development and maintain emotional equilibrium. Previous research that examined graphic violence warnings and their impact on concern, however, provided information to participants regarding violent content that might be personally disturbing to them, but they did not specifically mention potential injury to people in the media content that was to follow (Bellet et al., 2018; Bridgland et al., 2019; de Wied et al., 1997). It is possible a graphic warning that includes explicit information about threats to the main characters could create concern for the characters in the same way that graphic warnings that merely warn of upcoming disturbing content are known to create concern for the self.

In keeping with affective disposition theory (ADT; Raney, 2006; Zillmann & Cantor, 1976), this increased concern for characters could, in turn, generate concern for the self. Affective disposition theory argues that people generally prefer and enjoy narratives in which liked protagonists succeed and disliked antagonists fail (Madrigal, Bee, Chen, & LaBarge, 2011; Raney, 2006). Subsequently, when there is a reason for a media user to expect the opposite of what is perceived as the morally justified outcome for liked characters, the concern they experience for the liked character will also translate into a concern for the self as it is distressing to not know for sure if one's favorite character will come to a good end. We thus propose that a graphic warning, which is known to increase concern when people are invested in and concerned about a character's future, can increase concern for a character, which can in turn also heighten one's concern for oneself.

We thus propose four hypotheses regarding what happens when people are invested in and concerned about a character's future and themselves. The answers will help shed light on whether people might be more likely to self-spoil in an effort to protect themselves from the negative affect associated with an anticipated negative outcome for a liked character. Based on research indicating that graphic warnings can induce concern, we propose the following hypotheses:

H1: *An increase in the intensity of a graphic violence warning will (a) increase concern for the self and (b) increase concern for the characters during the narrative climax of a suspenseful television show.*

H2: *Increased concern for the characters that results from a graphic warning will mediate the relationship between graphic warning and concern for the self.*

Spoilers as Self-Protection and Concern for the Self and Characters

Viewers' concern for the self and the characters while consuming a narrative could be an important factor in understanding when people might choose to spoil themselves. Specifically, fear of seeing liked characters endangered might lead one to seek out information to protect oneself. If viewers already know what will happen, not only can they mentally prepare themselves but they can also potentially process that information more easily, thus reducing the negative emotions they might experience otherwise and helping them maintain an optimal mood (e.g., Reinecke, 2017).

These potential spoiler benefits might be particularly important for suspenseful narratives. These kinds of narratives typically produce concern for one's own emotional state and fear for the protagonist's well-being. Concern for the self includes fear of emotional distress that may include fear of fright, anxiety, and worry that may last well beyond the end of a movie or show. Concern for a character, or empathic distress, involves a fear that something bad may happen to a liked character (de Wied et al., 1997). Both empathic distress and concern for the self could be mitigated by spoiler information.

Empathic distress is an important factor in determining the level of suspense experienced by viewers. The more empathy people experience for a story character, the more suspense they will feel during a conflict featuring that character, and the more relief, and subsequent enjoyment, they experience at the resolution of that conflict (Comisky & Bryant, 1982; Zillmann, 1991). However, empathic distress can also be perceived as negatively impacting one's enjoyment: In line with previous research indicating that spoilers can help prevent para-social breakup distress (Ellithorpe & Brookes, 2018), the selection of spoilers could also prevent the negative emotions associated with the endangerment of liked characters. To manage their moods to the preferred levels of arousal, it is possible that viewers want to know what happens to their favorite character. In this case, the choice to spoil oneself may be the only way to avoid unwanted negative emotions. Thus, if media consumers are sufficiently concerned, they may believe a spoiler can relieve some of the stress, provide ontological security (cf. Hills, 2012), and help them better manage their moods. For these reasons, they may choose to spoil a narrative.

Concern for the self could be similarly associated with a desire for spoiler information. In line with mood management theory, people aim to maintain a positive emotional state (Reinecke, 2017). The worry, anxiety, and fear about oneself commonly associated with genres like suspense and horror (de Wied et al., 1997) are thus emotional states that some people may want to avoid. It follows, then, that if people expect to experience distress about their emotional state, they may opt to expose themselves to a spoiler as this may help them decide if they want to expose themselves to a particular narrative. Furthermore, based on ADT (Raney, 2006; Zillmann & Cantor, 1976), we expect that feeling empathic concern for the characters will also be associated with concern for oneself, in that the emotional distress experienced when anticipating something bad happening to a liked character is a negative affect state that people may be motivated to avoid.

Therefore, we predict that participants' self-reported concern for the characters and, for themselves, will be associated with an increased likelihood of seeking out information about how the narrative will end—essentially, that participants will choose to spoil the story.

H3:   *Concern for (a) the main characters and (b) the self during the narrative climax will predict an increased likelihood that participants will choose to expose themselves to spoiler information about the narrative.*

As mentioned above, the effect of spoilers on enjoyment and suspense is anything but straightforward. Evidence has indicated both the positive impact that spoilers can have on enjoyment and suspense (e.g., Johnson et al., 2020) as well as the negative effect that revelations about narrative outcomes can have on the narrative experience (e.g., Johnson & Rosenbaum, 2015). There is also theoretical reasoning to believe that suspense is related causally to enjoyment, such that as suspense increases, so does enjoyment. This greater enjoyment results from the misattribution of arousal from the suspense experience to the resolution of the narrative as well as the relief of tension when the narrative is concluded in a favorable way (Zillmann, 1980, 1991). For example, one study found that empathic distress was significantly related to enjoyment of tragedy content, such that the more distress viewers experienced, the more they reported enjoying the film when it was over (de Wied, Zillmann, & Ordman, 1995). Therefore, we propose the following hypothesis and research question:

H4:   *Suspense experienced while watching the episode will be positively associated with enjoyment of the episode after viewing.*

RQ1:   *Will those who choose spoiler information report more or less enjoyment and suspense than those who do not choose spoiler information?*

Pilot Testing

A total of 83 undergraduates (M_{age} = 20.51 years, 60.24% female) participated in the pilot test for extra credit in their courses through a participant pool at a large public university in the northern United States. They were asked to watch one of two versions of the episode ("The Father Thing" from Amazon's *Philip K. Dick's Electric Dreams*; Dinner & Dick, 2018) to be used in the full study and were asked to read and rate two reviews each.

Suspense Pilot Testing

Two highly suspenseful moments from the episode were pilot tested to determine the best stop point for use in the study. Two versions of the episode were created, each one stopping at a different point in the episode so that participants could indicate their concern for the self (scale 0–10, M = 4.51, SD = 3.21, Pearson's r = .73), concern for the two main characters (scale 0–10, M = 6.28, SD = 2.29, Cronbach's α = .84), and experience of suspense (scale −5 to +5, M = 1.48, SD = 1.74, Cronbach's α = .85). In the first version, the episode was stopped when Charlie is trapped in his family's garage as "The Father Thing" (i.e., an alien that looks like his father) approaches him menacingly. In the second version, Charlie and his friends are watching through a window as "The Father Thing" affectionately holds Charlie's mother (who is unaware of the alien invasion) and Charlie declares, "We need to save her. We need to get him away from her" (Dinner & Dick, 2018, 36:51). Results indicated that the first version resulted in marginally higher suspense (M = 1.83, SD = 1.69) compared with the second version (M = 1.17, SD = 1.75), $t(77)$ = 1.71, p = .09. There were no statistical differences in self-concern (first version M = 4.47, SD = 3.41; second

version M = 4.55, SD = 3.06) or character concern (first version M = 6.16, SD = 2.51; second version M = 6.38, SD = 2.11). The first version was therefore the stop point used in the full study.

Review Pilot Testing

To select the best possible reviews for use in the study, a total of 10 reviews for this specific episode were collected from the Internet, based on our perceptions of whether the review included spoilers (five with spoilers and five without spoilers). The 10 articles also purposefully varied in tone from negative to positive. For the pilot study, participants were randomly assigned two of the 10 articles to read; for each article, they were asked to indicate whether it spoiled the ending and also how positive or negative the review was using a slider from 0 (negative tone) through 50 (neutral tone) to 100 (positive tone). Based on the results, we selected one review that participants most highly agreed *included* spoilers (87.50% yes) and was relatively neutral in tone (M = 57.06, SD = 17.25) and one review that participants most highly agreed *did not include* spoilers (68.75% no), which was equal in tone (M = 57.44, SD = 15.02).

Main Study

Participants

Participants were 189 undergraduates who participated in the study for course credit through a participant pool at a large public university in the northern United States. Of these, 107 (56.6%) were female, and the median age was 20 years (M = 21.29, SD = 6.41, min = 18, max = 62).

Study Design and Procedure

The study employed a three-condition randomized experimental design for graphic warning (high graphic warning, low graphic warning, and control). Participants were presented with a detailed consent form and asked to indicate their consent to participate in the online study by clicking "Next" at the bottom of the page. As part of the consent process, they indicated that they were capable of completing the study in one sitting, which included watching 45 minutes of video with audio. After answering demographic questions, participants provided their attitudes toward spoilers, which were masked by randomizing the order of that scale's four items with items from an 18-item need for cognition scale.

They were then provided with the graphic warning manipulation, based on Brookes and Moyer-Gusé (2013). The control condition simply received instructions to "please click the next button to continue to the next part of the study." Participants in the low graphic warning condition read the following information:

> Before you watch the TV show, our university requires that we tell you what you can expect. The television show you are about to watch is rated "TV-MA." This indicates that the show is intended only for mature audiences. Be advised that it contains violence. Feel free to look away or leave the room if you are bothered by the violence at any point while viewing.

Participants in the high graphic warning condition read the following:

Before you watch the TV show, our university requires that we tell you what you can expect. The television show you are about to watch is rated "TV-MA," which is the highest rating available. This indicates that the show is intended only for mature audiences. Be advised that it contains a high level of violence. The characters in the show are involved in some very violent scenes. Some of the violence may be personally disturbing to you. Feel free to look away or leave the room if you are bothered by the violence at any point while viewing. If you would like to discontinue participation at this time, please select the option below.

This highest level of graphic warning provided information to induce threat to both the self and the characters, while the low graphic warning did not specifically mention the characters and only offered a minor threat to the self. Note that the television episode was rated TV-MA and did include some very violent scenes, so the warnings were accurate in all conditions. No participants elected to withdraw from the study after the warning.

Participants then watched the first 38 minutes of the television episode "The Father Thing" from the Amazon Original Series *Philip K. Dick's Electric Dreams* (Dinner & Dick, 2018). The episode was paused during the main plot point of the story. Participants were then asked to indicate how concerned they felt for themselves as well as for the two characters whose lives were potentially in danger at the cut point. Participants watched most of the episode before answering these questions for two reasons: (1) it allowed them to become invested in the characters before assessing their concern, and (2) this particularly suspenseful moment was likely the peak of their concern for both themselves and the characters.

Participants were then provided the following cover story for the spoiler selection task:
Sometimes people will spend time reading information about a story while they watch. We are interested in understanding how this secondary information seeking during a story affects enjoyment of the story. One way people seek information about what they are watching is to read reviews of the content. Below are some reviews of the episode you have been watching. Before continuing to finish the story, please select ONE review to read.

They then selected between the review with spoilers, titled "'The Father Thing' episode in Amazon's *Electric Dreams* series is like *Close Encounters of the Third Kind* [CAUTION: SPOILER ALERT!]" (Mudede, 2018), and the review without spoilers, titled "*Philip K. Dick's Electric Dreams:* 'The Father Thing' is an homage to classic alien invasion films" (E, 2018). The original title of the non-spoiled review was "*Philip K. Dick's Electric Dreams*: 'The Father Thing,'" but a partial line from the article was added to bring it more in line with the other title. Both are real reviews published on review websites.

The review selected by the participant then opened in a new tab, and participants were asked to read the review and then return to the main survey screen to watch the remainder of the episode. Next, participants watched the final six minutes of the episode before indicating their enjoyment of the episode and how much suspense they experienced at the end of the episode. They were debriefed on the full purpose of the study before exiting the survey.

Measures

Concern for the Self

At the aforementioned stop point (38 minutes into the 44-minute episode), concern for the self was measured with two items adapted from Brookes and Moyer-Gusé (2013): "I am worried that I might see something I do not want to see" and "I am concerned that the TV show might be personally disturbing to me." Participants were asked to indicate their agreement with each of these two items on a scale from 0 (not at all true) to 10 (completely true; $M = 4.08$, $SD = 2.89$, Pearson's $r = .68$).

Concern for the Characters

At the same stop point, concern for the characters was measured with two items adapted from Brookes and Moyer-Gusé (2013): "I am worried that X will meet a violent end" and "I am concerned that X will be involved in violence" on a scale from 0 (not at all true) to 10 (completely true). These two questions were asked about both Charlie and Charlie's mom; thus the full scale had four items ($M = 6.08$, $SD = 2.35$, Cronbach's $\alpha = .87$). These questions were asked about each of the main characters separately due to potential differences in risk assessment and resulting concern. It is also possible that participants may have experienced more empathy for one character than the other, which could also result in a difference in concern. Analyses revealed that concern for both characters were reliable together as a scale, so they were combined for hypothesis testing.

Enjoyment

Enjoyment was measured with a single item after the entire episode was viewed (Green, Brock, & Kaufman, 2004): "How much did you enjoy watching the TV episode, on a scale from 0 (not at all) to 10 (very much)?" ($M = 5.72$, $SD = 2.39$).

Suspense

Suspense was measured after the entire episode was viewed, using six items from Knobloch, Patzig, Mende, and Hastall (2004). These six items asked participants to rate how exciting, thrilling, and gripping the episode was, in addition to how expectant, excited, and in suspense they felt while viewing it. All six items were on a scale from −5 (strongly disagree) to +5 (strongly agree; $M = 1.49$, $SD = 2.03$, Cronbach's $\alpha = .92$).

Enjoyment of the Suspense Genre

Participants indicated their agreement with the item "I enjoy the suspense genre" on a scale from −5 (strongly disagree) to +5 (strongly agree; $M = 2.44$, $SD = 2.46$).

Attitudes Toward Spoilers

The extent to which participants sought out and enjoyed spoilers was measured with a four-item scale before they viewed the episode. The scale was designed for this study. The items were the following:

"I enjoy being exposed to spoilers about what will happen in TV shows and movies," "If the plot of a TV show or movie gets spoiled for me, I am disappointed," "Knowing what will happen in a show or movie before it happens makes me enjoy the show or movie more," and "I actively seek out spoilers about what will happen in TV shows and movies." Responses to all four items were indicated on a scale from −5 (strongly disagree) to +5 (strongly agree), and the second item was reverse-coded ($M = -2.40$, $SD = 2.26$, Cronbach's α = .81).

Spoiler Selection

Seventy participants (37.04% of the sample) chose the spoiler review.

Results

A saturated path model was estimated using generalized structural equation modeling in Stata 14 (Figure 1). The model predicting whether participants chose to spoil themselves was set to logistic due to the variable's dichotomous nature. Full statistical results are available in Table 1.

The graphic warning manipulation was not a significant predictor of concern for the self, nor was it a significant predictor of concern for the characters. Thus, H1a and H1b were not supported. Prior attitude toward spoilers was significantly positively associated with concern for the self, while enjoyment of the suspense genre was negatively related to concern for the self. Because H1a and H1b were not supported, H2—predicting mediation—also was not supported; we did not find any indirect effects using bias-corrected bootstrapped confidence intervals (1,000 bootstrap samples): Low graphic warning condition compared with control, $b= -0.51$, 95% confidence interval (CI; −1.05, 0.02); high graphic warning condition compared with control, $b = 0.00$, 95% CI (−0.57, 0.51).

There was, however, a significant relationship between concern for the characters and concern for the self, such that as concern for the characters increased, so did concern for the self. Therefore, while there was no significant mediation effect due to the lack of influence of the graphic warning manipulation, our prediction that concern for the characters would be associated with concern for the self was supported.
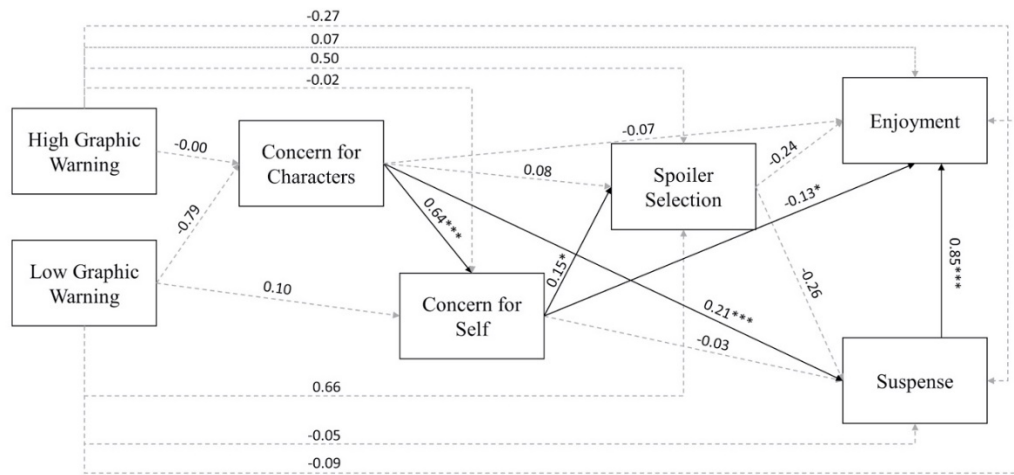
Figure 1. Saturated path model.

Concern for the self was a significant predictor of whether participants chose an article with spoiler information before finishing the narrative, such that as concern for the self increased, so did the likelihood of selecting spoilers, supporting H3b. Concern for the characters, however, was not associated with the likelihood of choosing the spoiled review. Thus, H3a was not supported. Prior attitude toward spoilers also was positively associated with selecting spoilers.

Table 1. Statistical Modeling Results.

	Concern for the Characters		Concern for the Self		Spoiler Selection		Enjoyment		Suspense	
	b	CI	*b*	CI	OR	CI	*b*	CI	*b*	CI
Graphic warning										
Low	−0.79	[−1.61, 0.02]	−0.10	[−0.76, 0.96]	1.94	[0.86, 4.34]	−0.09	[−0.76, 0.58]	−0.05	[−0.64, 0.53]
High	−0.00	[−0.82, 0.82]	−0.02	[−0.87, 0.83]	1.65	[0.74, 3.68]	0.07	[−0.59, 0.74]	−0.27	[−0.85, 0.31]
Attitudes toward spoilers	−0.12	[−0.27, 0.03]	**0.16**	**[0.00, 0.31]**	**1.24**	**[1.07, 1.44]**	0.01	[−0.11, 0.13]	0.02	[−0.09, 0.13]
Genre enjoyment	0.04	[−0.10, 0.17]	**−0.25**	**[−0.40, −0.11]**	1.03	[0.90, 1.18]	−0.06	[−0.18, 0.06]	**0.18**	**[0.08, 0.28]**
Concern for the characters	—	—	**0.64**	**[0.49, 0.79]**	1.09	[0.92, 1.29]	−0.07	[−0.21, 0.07]	**0.21**	**[0.09, 0.33]**
Concern for the self	—	—	—	—	**1.17**	**[1.02, 1.33]**	**−0.13**	**[−0.24, −0.02]**	−0.03	[−0.13, 0.07]
Spoiler selection	—	—	—	—	—	—	−0.24	[−0.82, 0.35]	−0.26	[−0.77, 0.25]
Suspense	—	—	—	—	—	—	**0.85**	**[0.68, 1.01]**	—	—

Note. OR = odds ratio.
Coefficients reported are unstandardized, and confidence intervals are with a 5% alpha error rate (95% CIs). Logistic regression was used to obtain reported ORs for predicting spoiler choice. The graphic warning manipulation was entered as a dummy variable with the no warning information (control) condition as the comparison. Bold text denotes the significance at $p < .05$ for ease of interpretation.

Whether participants selected spoilers was not a significant predictor of either enjoyment or suspense, providing an answer for RQ1.[1] However, concern for the self was significantly associated with enjoyment, such that increased concern for the self was associated with decreased enjoyment, while increased concern for the characters was significantly associated with increased suspense. Enjoyment of the suspense genre was positively associated with reported suspense. Reported suspense was also significantly associated with enjoyment, consistent with previous research (Zillmann, 1980; Zillmann, 1991) and providing an answer for H4.

Overall, results suggest that graphic warnings did not influence concern for the characters or the self, but to the extent that participants naturally experienced these outcomes, it predicted their decision to expose themselves to spoilers or not. However, regardless of whether participants selected or avoided spoilers, their subsequent suspense and narrative enjoyment were not affected.

Discussion

The present study employed a between-subjects experiment using a naturalistic stimulus, a true choice to be spoiled, and real online reviews to examine the impact of graphic warnings on people's decision to self-spoil, how this relationship is affected by concern for the self and the characters, and the effect of the decision to spoil on people's enjoyment and suspense. Results suggested that when people experienced concern for themselves, they were more likely to spoil themselves, providing evidence for the premise that spoilers can serve a self-protective function and can help people manage their moods more effectively. Contrary to expectations, the use of a graphic warning did not impact people's decision to self-spoil, either directly or through empathic concern or concern for self. Furthermore, spoilers did not impact participants' enjoyment or suspense. Overall, then, these results underscore the finding that spoilers may not be that instrumental in determining people's enjoyment of a narrative.

One major limitation of the current study is that all participants had forced exposure to some type of information about the show. As a result, there was no way to assess whether reading the review might have caused participants to reinterpret what they had already seen. This in turn could have affected their interpretation of the remainder of the story, impacting enjoyment and suspense. Our pilot test suggested that the non-spoiler article was rated as the least likely to spoil the narrative (and significantly different from the spoiler article selected), but some participants in the pilot study did indicate they felt there was some spoiler information in the former. This means that, while the selection of the article labeled "SPOILER ALERT!" in bold capital letters compared with the one without such a label can reasonably be interpreted as selecting spoilers versus not for purposes of spoiler selection as the focal dependent variable, the effects of article selection on narrative outcomes may be more difficult to tease apart. Thus, the nonsignificant results for the effect of spoiler selection on enjoyment and suspense should not be interpreted as a definitive lack of effect. Future research should not only include

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[1] Power analysis for the effect of spoiler choice on enjoyment indicated that there would have been adequate power to detect a true effect at power =.977 given the group means (not spoiled M = 6.94, SD = 2.30, spoiled M = 6.34, SD = 2.49) and the group sample sizes of 119 and 170, respectively.

a control condition in which no reviews are read but also explore how information about a show could retroactively affect someone's viewing experience.

Additionally, because we kept the original titles of the reviews, this meant that these titles were inconsistent with one another. This decision was made to increase the external validity of the study as these article titles would more closely resemble the options a media consumer would encounter when searching online for information about the show. We were concerned that titles bearing only the spoiler/no-spoiler designation would lead to stronger demand effects than the version ultimately used. However, it remains a possibility that something about each article title was driving some of the selection, appealing to participants outside of their spoiled or unspoiled nature. One of the titles, for instance, referenced a 1970s' science-fiction movie, which could have primed the respondents to expect a certain kind of outcome.

Another limitation to consider is that the mere presence of a graphic violence warning might have been perceived as a spoiler by some participants because it provides clues about the direction of the narrative. In addition, the graphic warnings mention violence and, in one case, about the characters being involved in violence. It is possible that the word "violence" caused some participants to merely be concerned (or even curious) about the disturbing images they were about to see. The present study also did not measure whether respondents actually read the review they selected. However, in line with studies on medical interventions, this study operated under the "intent to treat" principle, analyzing respondents who were (self-)assigned to a group as having completed the trial (e.g., McCoy, 2017). Future studies could alleviate this by asking specific questions about the review or timing how long respondents spend with a review.

Furthermore, participants in this study all experienced a break in their viewing of the narrative. This break could have potentially impacted the enjoyment and suspense they experienced while watching the show and could have potentially heightened participants' reactance, especially because the show was paused during the height of the narrative arc. It is possible that the enjoyment that people reported after viewing was impacted by the break in viewing and the subsequent frustration or disappointment at not being able to watch the show the entire way through as well as the exposure to a (spoiled or unspoiled) review. A control group that watches the entire show without interruptions could be one way to assess the impact of a break in the narrative experience. Alternatively, respondents could be given the option to stop at any time in the narrative and read a review of the show. Future studies that use this kind of design should consider including both options (or at minimum, one of the two) as a control group. A final limitation is the use of an American show and U.S.-based participants. While the theoretical premises that underpin this study have been tested in contexts outside the United States (e.g., Johnson & Rosenbaum, 2018), and it is likely that the findings from this study are generalizable to international contexts, future studies should consider relying on international samples and stimuli to examine the possibility of cultural differences in the impact of spoilers.

Future studies should explore how the opportunity to spoil oneself at different points in the narrative might lead to different results. In this particular study, we decided to offer spoiler information toward the end of the episode to increase the likelihood that participants would be invested in the narrative and its characters. However, this may not map onto reality as media consumers may choose to access spoiler information before they even begin consuming a narrative, or at any point during that consumption. Another approach to research might involve offering access to spoiler information at any point during the

narrative when participants desire it, which would be more naturalistic, and provide more information regarding the timing and type of content most associated with spoiler selection.

The graphic warning manipulation's lack of success is worth mentioning as well. This failure could be attributed to the length of the television episode used for the study. Because the episode was 44 minutes long and respondents viewed 38 of those minutes before they reported their concern for themselves and the characters, it is possible that respondents had either forgotten or dismissed the graphic warning manipulation. Previous research in which graphic warnings successfully impacted participants' emotional experience involved shorter media exposure than this study, such as single pictures, scenes from a movie, or film clips (Bridgland et al., 2019; Cantor et al., 1984; de Wied et al., 1997). The brief nature of media used in these studies with successful graphic warning manipulations, combined with the unsuccessful graphic warning in our study with longer media content, indicates that graphic warnings may have less impact than earlier work might suggest. This seems especially likely given that most media exposure is longer than that encountered in those studies with successful graphic warning manipulations. In other words, if media consumers encounter information in the real world that warns them of graphic violence against the characters in a film (e.g., a vague warning that a main character dies or is injured), it may not impact concern for the characters in the film. Ultimately, though, the graphic warning manipulation's lack of success does not diminish the findings of this study. Participants naturally experienced these concerns to varying degrees nonetheless, and, as the study showed, this impacted their likelihood of wanting to spoil themselves.

While findings showed that spoiler exposure did not influence later enjoyment or suspense, participants who expressed a greater concern for their own feelings or the characters did report differences in enjoyment and suspense, with participants who experienced a higher concern for the self reporting less enjoyment and those who reported a higher concern for the characters experiencing higher levels of suspense. The connection between concern for the self and a preference for a spoiled review underlines the role spoilers play in avoiding emotional distress—that when people experience emotional distress, they seek to reduce it, and spoilers, with the kind of information that will reduce narrative uncertainty, are seen as a way to alleviate this distress. The finding that people who were concerned for the characters did not seek out spoilers appears to contradict Hills' (2012) supposition that people will spoil themselves to protect "their emotional attachments" (p. 115).

Spoilers' lack of effect on suspense is particularly unsurprising, given the research on the paradox of suspense. Though theorists have long argued that suspense is contingent on uncertainty (e.g., Carroll, 1996), some research has indicated that the experience of suspense does not diminish on repeated exposure to the same narrative (e.g., Brewer, 1996). A number of theories have been offered to explain this paradox, including voluntary amnesia (e.g., De Beaugrande & Colby, 1979), an innate expectation of uniqueness from our life experiences (Gerrig, 1989), identification with the characters (Zillmann, 1994), and vicarious experience of doubt on behalf of the characters (Lipsky, 1956), among others. These latter two explanations might seem to support our results, given that the natural experience of concern for the characters was associated with more suspense. Thus, knowing about the ending might not have affected their suspense, but a connection to the characters via concern for their well-being served to increase suspenseful emotions.

The link between character concern and suspense is expected as years of previous research have indicated the importance of character involvement for the suspense experience (e.g., Knobloch-Westerwick

& Keplinger, 2006). A more interesting connection is the one between concern for the self and enjoyment. In the present study, greater concern for the self was associated with decreased enjoyment of the episode. Previous research into self-threat has not examined enjoyment (de Wied et al., 1997) or the direct effect of concern for the self on enjoyment (Brookes & Moyer-Gusé, 2013). The Brookes and Moyer-Gusé (2013) study found a positive association between self-concern and enjoyment but only indirectly through increased suspense. The present study appears to touch on the apparent contradiction between self-concern (generally a negative experience) and the hedonistic dimension of enjoyment that was captured here. One potential link is the individual difference in enjoyment of the suspense genre, which was significantly positively associated with experiencing suspense during the video but negatively associated with concern for the self. It is possible that people high in suspense enjoyment do not allow themselves to feel concern so that they enjoy the feeling of suspense or that their ability to feel unconcerned is what gives them enjoyment of the genre. Future research should thus consider using a measure of enjoyment that captures both hedonistic and eudaimonic dimensions of enjoyment (e.g., Oliver & Bartsch, 2010) and should also consider the role of individual differences in suspense enjoyment.

Overall, the results of this study suggest that spoilers do not always have negative effects as many media consumers intuitively believe. Rather, spoilers may actually be desirable when a narrative poses the potential for emotional threat. Furthermore, spoilers can be used to reduce emotional distress. The present study suggests that self-selection of spoilers may be one aspect that reduces the impact of spoiler exposure on narrative outcomes; for those who enjoy and seek out spoilers, enjoyment and suspense are not diminished. But for people who do not enjoy spoilers and actively avoid them, exposure to a spoiler may truly ruin their narrative experience, as indicated by previous research into the potentially harmful impact of spoilers (e.g., Rosenbaum & Johnson, 2016). This could explain the mixed results produced by previous research into the relationship between spoilers, reactance, and enjoyment. The results of this study indicate that the selection of spoilers did not affect enjoyment or suspense, but future research should explore more specifically the conditions under which enjoyment and suspense will or will not be impacted by spoilers. The results of the present study suggest that people may be more motivated to seek spoilers when they fear they may be exposed to content that they do not want to see. This desire to protect the self from a negative experience suggests the importance of the avoidance of emotional distress in spoiler selection, and it serves as both a potential motivating mechanism for when people will select spoilers as well as an explanation for individual differences in spoiler attitudes and spoiler-seeking behavior.

References

Bellet, B. W., Payton, J. J., & McNally, R. J. (2018). Trigger warning: Empirical evidence ahead. *Journal of Behavioral Therapy and Experimental Psychiatry, 61*, 134–141. doi:10.1016/j.jbtep.2018.07.002

Brewer, W. F. (1996). The nature of narrative suspense and the problem of rereading. In P. Vorderer, H. J. Wulff, & M. Friedrichsen (Eds.), *Suspense: Conceptualizations, theoretical analyses, and empirical explorations* (pp. 107–127). Mahwah, NJ: Lawrence Erlbaum.

Bridgland, V. M. E., Green, D. M., Oulton, J. M., & Takarangi, M. K. T. (2019). Expecting the worst: Investigating the effects of trigger warnings on reactions to ambiguously themed photos. *Journal of Experimental Psychological Applications, 25*(4), 602–617. doi:10.1037/xap0000215

Brookes, S., Cohen, J., Ewoldsen, D. R., & Velez, J. (2012, May). *Don't talk about her like that: The effect of character information valence on identification and enjoyment*. Paper presented at the Annual Meeting of the International Communication Association, Phoenix, AZ.

Brookes, S., & Moyer-Gusé, E. (2013). *Affective disposition theory in suspense: Elucidating the role of character liking in creating suspenseful affect*. Paper presented at the annual meeting of the National Communication Association, Washington, DC.

Cantor, J., Ziemke, D., & Sparks, G. G. (1984). The effect of forewarning on emotional responses to a horror film. *Journal of Broadcasting, 28*(1), 21–31. doi:10.1080/08838158409386512

Carroll, N. (1996). The paradox of suspense. In P. Vorderer, H. J. Wulff, & M. Friedrichsen (Eds.), *Suspense: Conceptualizations, theoretical analyses, and empirical explorations* (pp. 71–91). Mahwah, NJ: Lawrence Erlbaum.

Comisky, P., & Bryant, J. (1982). Factors involved in generating suspense. *Human Communication Research, 9*(1), 49–58. doi:10.1111/j.1468-2958.1982.tb00682.x

De Beaugrande, R., & Colby B. N. (1979). Narrative models of action and interaction. *Cognitive Science, 3*(1), 43–66. doi:10.1207/s15516709cog0301_3

de Wied, M., Hoffman, K., & Roskos-Ewoldsen, D. R. (1997). Forewarning of graphic portrayal of violence on the experience of suspenseful drama. *Cognition & Emotion, 11*(4), 481–494. doi:10.1080/026999397379890

de Wied, M., Zillmann, D., & Ordman, V. (1995). The role of empathic distress in the enjoyment of cinematic tragedy. *Poetics, 23*(1–2), 91–106. doi:10.1016/0304-422X(94)00010-4

Dinner, M. (Writer & Director), & Dick, P. K. (Writer). (2018, January 12). The father thing (Season 1, Episode 7) [TV series episode]. In B. Cranston, M. Davis, J. Degus, M. DeRoss, I. D. Hackett, K. DiMento, . . . C. Tricarico (Executive Producers), *Philip K. Dick's electric dreams*. London, UK: Channel 4 Television Corporation; Moon Shot Entertainment; Sony Pictures Television.

E, T. (2018, February 27). *Philip K. Dick's Electric Dreams: "The Father Thing."* Plain, simple Tom reviews. Retrieved from https://plainsimpletomreviews.com/2018/02/27/philip-k-dicks-electric-dreams-the-father-thing/

Ellithorpe, M. E., & Brookes, S. E. (2018). I didn't see that coming: Spoilers, fan theories, and their influence on enjoyment and parasocial breakup distress during a series finale. *Psychology of Popular Media Culture, 7*(3), 250–263. doi:10.1037/ppm0000134

Gerrig, R. J. (1989). Reexperiencing fiction and non-fiction. *Journal of Aesthetics and Art Criticism, 47*(3), 277–280. doi:10.2307/431007

Gray, J., & Mittell, J. (2007). Speculation on spoilers: *Lost* fandom, narrative consumption and rethinking textuality. *Participations, 4*(1), 1–35. Retrieved from http://www.participations.org/Volume%204/Issue%201/4_01_graymittell.htm

Green, M. C., Brock, T. C., & Kaufman, G. F. (2004). Understanding media enjoyment: The role of transportation into narrative worlds. *Communication Theory, 14*(4), 311–327. doi:10.1111/j.1468-2885.2004.tb00317.x

Hills, M. (2012) Psychoanalysis and digital fandom: Theorizing spoilers and fans' self-narratives. In R. A. Lind (Ed.), *Producing theory in a digital world: The intersection of audiences and production in contemporary theory* (pp. 105–122). New York, NY: Peter Lang.

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.

Johnson, B. K., & Rosenbaum, J. E. (2015). Spoiler alert: Consequences of narrative spoilers for dimensions of enjoyment, appreciation, and transportation. *Communication Research, 42*(8), 1068–1088. doi:10.1177/0093650214564051

Johnson, B. K., & Rosenbaum, J. E. (2018). (Don't) tell me how it ends: Spoilers, enjoyment, and involvement in television and film. *Media Psychology, 21*(4), 582–612. doi:10.1080/15213269.2017.1338964

Johnson, B. K., Udvardi, E., Eden, A., & Rosenbaum. J. E. (2020). Spoilers go bump in the night: Impacts of minor and major reveals on horror film enjoyment. *Journal of Media Psychology, 32*(1), 1–12. doi:10.1027/1864-1105/a000252

Knobloch, S., Patzig, G., Mende, A., & Hastall, M. (2004). Affective news: Effects of discourse structure in narratives on suspense, curiosity, and enjoyment while reading news and novels. *Communication Research, 31*(3), 259–287. doi:10.1177/0093650203261517

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

Knobloch-Westerwick, S., & Keplinger, C. (2006). Mystery appeal: Effects of uncertainty and resolution on the enjoyment of mystery. *Media Psychology, 8*(3), 193–212. doi:10.1207/s1532785xmep0803_1

Kryston, K., Ulusoy, E., Grady, S. M., Johnson, B. K., Rosenbaum, J. E., & Eden, A. (2022). Seeking spoilage: The impact of content challenge, self-control, and traits on spoiler selection. *Journal of Broadcasting and Electronic Media, 66*(3), 440–463. doi:10.1080/08838151.2022.2110593

Leavitt, J. D., & Christenfeld, N. J. S. (2011). Story spoilers don't spoil stories. *Psychological Science, 22*(9), 1152–1154. doi:10.1177/0956797611417007

Leavitt, J. D., & Christenfeld, N. J. S. (2013). The fluency of spoilers: Why giving away endings improves stories. *Scientific Study of Literature, 3*(1), 93–104. doi:10.1075/ssol.3.1.09lea

Levine, W. H., Betzner, M., & Autry, K. S. (2016). The effect of spoilers on the enjoyment of short stories. *Discourse Processes, 53*(7), 513–531. doi:0.1080/0163853X.2016.1141350

Lipsky, E. (1956). Suspense. In H. Brean (Ed.), *The mystery writer's handbook* (pp. 103–112). New York, NY: Harper.

Madrigal, R., Bee, C., Chen, J., & LaBarge, M. (2011). The effect of suspense on enjoyment following a desirable outcome: The mediating role of relief. *Media Psychology, 14*(3), 259–288. doi:10.1080/15213269.2011.596469

McCoy, C. E. (2017). Understanding the intention-to-treat principle in randomized controlled trials. *Western Journal of Emergency Medicine, 18*(6), 1075–1078. doi:10.5811/westjem.2017.8.35985

Mecklenburg, A. C. (2021). The sensational temporality of spoilers in *The Woman in White* and *Avengers: Endgame*. *Nineteenth-Century Contexts, 43*(1), 55–67. doi:10.1080/08905495.2021.1867816

Mudede, C. (2018, January 31). *Why "The Father Thing" episode in Amazon's* Electric Dreams *series is like* Close Encounters of the Third Kind. *The Stranger*. Retrieved from https://www.thestranger.com/film/2018/01/31/25768860/why-the-father-thing-episode-in-amazons-electric-dreams-series-is-like-close-encounters-of-the-third-kind

Oliver, M. B., & Bartsch, A. (2010). Appreciation as audience response: Exploring entertainment gratifications beyond hedonism. *Human Communication Research, 36*(1), 53–81. doi:10.1111/j.1468-2958.2009.01368.x

Perks, L., & McElrath-Hart, N. (2018). Spoiler definitions and behaviors in the post-network era. *Convergence, 24*(2), 137–151. doi:10.1177/1354856516659403

Raney, A. A. (2006). The psychology of disposition-based theories of media enjoyment. In J. Bryant & P. Vorderer (Eds.), *Psychology of entertainment* (pp. 137–150). Mahwah, NJ: Lawrence Erlbaum.

Reinecke, L. (2017). Mood management. In P. Rössler (Ed.), *The international encyclopedia of media effects* (pp. 1271–1284). Hoboken, NJ: Wiley-Blackwell.

Reinhart, A. M., Marshall, H. M., Feeley, T. H., & Tutzauer, F. (2007). The persuasive effect of message framing in organ donation: The mediating role of psychological reactance. *Communication Monographs, 74*(2), 229–255. doi:10.1080/03637750701397098

Rosenbaum, J. E., & Johnson, B. K. (2016). Who's afraid of spoilers? Need for cognition, need for affect, and narrative selection and enjoyment. *Psychology of Popular Media Culture, 5*(3), 273–289. doi:10.1037/ppm0000076

Shevenock, S. (2020). *Spoiler alert: Spoilers can be good for business*. Morning Consult. Retrieved from https://pro.morningconsult.com/articles/spoiler-culture-reality-tv-bachelorette

Topolinkski, S. (2014). A processing fluency-account of funniness: Running gags and spoiling punchlines. *Cognition and Emotion, 28*(5), 811–820. doi:10.1080/02699931.2013.863180

Yan, D., & Tsang, A. S. L. (2016). The misforecasted spoiler effect: Underlying mechanisms and boundary conditions. *Journal of Consumer Psychology, 26*(1), 81–90. doi:10.1016/j.jcps.2015.05.003

Zillmann, D. (1980). Anatomy of suspense. In P. H. Tannenbaum (Ed.), *The entertainment functions of television* (pp. 133–163). New York, NY: Psychology Press.

Zillmann, D. (1983). Transfer of excitation in emotional behavior. In J. T. Cacioppo & R. E. Petty (Eds.), *Social psychophysiology: A sourcebook* (pp. 215–240). New York, NY: The Guilford Press.

Zillmann, D. (1991). The logic of suspense and mystery. In J. Bryant & D. Zillmann (Eds.), *Responding to the screen: Reception and reaction processes* (pp. 281–303). Hillsdale, NJ: Lawrence Erlbaum.

Zillmann, D. (1994). Mechanisms of emotional involvement with drama. *Poetics, 23*(1–2), 33–51. doi:10.1016/0304-422X(94)00020-7

Zillmann, D., & Cantor, J. (1976). A disposition theory of humor and mirth. In T. Chapman & H. Foot (Eds.), *Humor and laughter: Theory, research, and application* (pp. 93–115). Hoboken, NJ: John Wiley & Sons.

Zillmann, D., Hay, T. A., & Bryant, J. (1975). The effect of suspense and its resolution on the appreciation of dramatic presentations. *Journal of Research in Personality, 9*(4), 307–323. doi:10.1016/0092-6566(75)90005-7