Who's Afraid of Spoilers:

Need for Cognition, Need for Affect, and Narrative Selection and Enjoyment

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Please cite as:

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

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Abstract

As indicated by the phrase "spoiler alert!", many people actively avoid spoilers. Previous experimental studies into the impact of spoilers on enjoyment (Johnson & Rosenbaum, in press, Leavitt & Christenfeld, 2011, 2013) produced contradictory findings, and the present study investigates whether personality traits moderate the relationship between spoilers and enjoyment. Comprehension theories and resource matching theory are used to develop competing hypotheses about the impact of the interaction between spoilers and need for cognition on narrative preference, enjoyment, and transportation, while excitation-transfer theory and mood management theory suggest that the interaction between spoilers and need for affect would produce a decrease in preference, enjoyment, and transportation. An experiment ($N = 368$) tested these hypotheses and found that those low on need for cognition held a selective preference for spoiled stories, while individuals with a high need for affect enjoyed unspoiled stories more. In addition, fiction reading frequency was positively related to the enjoyment of unspoiled stories.

Keywords: narrative, entertainment, enjoyment, preferences, individual differences

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Avoiding spoilers has become a constant activity for some media users, as they venture online or talk to friends before having a chance to watch the latest installment of their favorite show, attend the latest blockbuster film, or read the newest bestseller. The fear of knowing the outcome of the latest narrative development is so great, research has actually started looking into the development of automatic online spoiler detectors (Boyd-Graber, Glasgow, & Zajac, 2013) to better help users avoid those feared spoilers.

But do spoilers really spoil? In other words, does knowing the outcome of a narrative ruin one's enjoyment of the story? And what other factors might play a role in one's (predicted) enjoyment of a spoiled story? Initial research into narrative and enjoyment upheld the conventionally held belief that the resolution of narrative uncertainty turns suspense into enjoyment (Zillmann, 1980, 1991). Recent studies, however, have shown that the relationship between spoilers and enjoyment is more complex than one might suspect. Leavitt and Christenfeld (2011, 2013) found, all lay theories aside, that spoiled stories were actually enjoyed more than unspoiled stories. A more recent study (Johnson & Rosenbaum, in press) further investigated this claim, and found the opposite, that unspoiled stories were not only reported as more enjoyable, but also as more moving and thought-provoking, suspenseful, fun, and cognitively transporting. Given these contradictory findings, it would thus seem that moderating factors such as individual differences play a role in determining how one's enjoyment is impacted by familiarity with the narrative resolution.

The current study presents a follow-up wherein we investigate two trait variables, namely need for cognition and need for affect, that could potentially influence the enjoyment users

obtain from spoiled and unspoiled stories, as well as the influence they could exert on the audience's selective preference for spoiled or unspoiled narratives.

We will begin by outlining extant knowledge about spoilers and enjoyment, discussing the nature of need for cognition and need for affect, and delving into what is known about the relationship between these two variables and selectivity and enjoyment. Next, we will present our hypotheses surrounding the role played by the personality traits in the preference for and enjoyment of spoiled and unspoiled stories. Finally, we will present the findings from a study that experimentally manipulated spoilers for short stories that were read and selected by participants, who also completed several scales measuring traits.

Spoilers and Enjoyment

The starting point for the present study is the widespread belief that enjoyment is negatively impacted by the presence of spoilers. A spoiler is generally seen as any information that gives away essential plot details prematurely, and is, on the whole, perceived as something to be avoided (Gray & Mittell, 2007; Hassoun, 2013). A recent study, however, found a counterintuitive positive effect of spoilers on a single-item measure of enjoyment (Leavitt & Christenfeld, 2011). The respondents in that study, who read from among 12 different short narratives from three different genres, consistently preferred spoiled stories more than stories presented without a spoiler. In a series of follow-up experiments, Leavitt and Christenfeld (2013) examined processing fluency (i.e., the ease of understanding and thinking about a story) as an explanatory mechanism, and not only found that processing fluency mediated the effect of spoilers on enjoyment, but also that spoilers might enhance enjoyment by ensuring that stories are consistent with readers' expectations. These results indicate that the ease with which a story

can be comprehended is increased by the presence of spoilers, and this fluency, in turn, can increase enjoyment of the narrative experience.

However, the finding that spoilers increased enjoyment was extensively tested in a replication and extension (Johnson & Rosenbaum, in press), which contrary to the prior findings (Leavitt & Christenfeld, 2011), but in line with excitation transfer theory (Zillmann, 1971) as well as commonly accepted lay theories, found that spoilers negatively impacted both enjoyment and appreciation. The replication study used an experimental design that, as opposed to Leavitt and Christenfeld's single-item scale (1 = *lowest rating*, 10 = *best rating*) for measuring enjoyment, used the multi-dimensional and well-validated measure for enjoyment and appreciation developed by Oliver and Bartsch (2010). The replication found that, in keeping with the notion that narrative uncertainty heightens the emotional experience (Zillmann, 1971; 2006), but in contrast to prior findings (Leavitt & Christenfeld, 2011), participants rated unspoiled stories to be more enjoyable, fun, and suspenseful. While the mental models perspective (Roskos-Ewoldsen, Roskos-Ewoldsen, Yang, & Lee, 2007) as well as the notion of processing fluency (Reber, et al., 2004) imply that familiarity with a story's outcome should increase the meaning drawn from the story, the replication study instead found that participants rated unspoiled stories as more moving/thought-provoking (Johnson & Rosenbaum, in press). The replication also tested if transportation, linked to enjoyment (Green et al., 2004), defined as "[t]he process of becoming fully engaged in the narrative world" (Green, Brock, & Kaufman, 2004, p. 312), and argued to be both positively and negatively impacted by prior knowledge (cf. Reber, Schwarz, & Winkielman, 2004; Zillmann, 1991), was affected by spoilers. It found that spoilers negatively impacted the cognitive transportation subscale of Green and Brock's (2000) narrative transportation measure. Cognitive transportation involves the visualization of and

mental involvement in the story world. Interestingly, the study revealed that the presence of spoilers did not impact participants' story preferences in a selection task.

A proposed explanation for these surprising findings (Johnson & Rosenbaum, in press) and their contrast with the earlier findings of Leavitt and Christenfeld (2011, 2013), besides the possibility that the responses to the latter's single-item measure of enjoyment did not capture enjoyment adequately or in its entirety, was the moderating influence of other variables, such as genre, medium, and an individual's personality traits. The enjoyment of some genres might be more influenced by spoilage (e.g., mystery novels, crime shows) than genres that are less centered on the narrative resolution, while some media, such as comics, are designed so that users can more easily spoil the narrative for themselves (cf. Hassoun, 2013). However, Leavitt and Christenfeld (2011) offered an initial test of short story genre as a moderator, finding no differences, while no experimental spoiler studies to date make use of anything other than short stories presented in a print format.

Another possible type of moderator, and the one we will consider in the present study, is an individual's traits. Variation in individual differences in the composition of the study samples may explain the divergent results seen in Leavitt and Christenfeld (2011, 2013) versus Johnson and Rosenbaum (in press). These studies used very similar protocols, sample sizes, stimuli, and dependent variables. Perhaps the most notable difference is their sample populations: one study drew from psychology students at a research-intensive university on the West Coast, another from students across majors at a medium-sized historically black university in the Southeast. Thus the simplest explanation could be that differences in personality traits and individual variations in entertainment preferences account for the findings, and are necessary to properly identify the effects of spoilers on enjoyment.

Traits and Responses to Narratives

Individual differences have been found to impact audience responses to narratives and other media entertainment (e.g., Garrido & Schubert, 2011; Hall, 2005; Kraaykamp & van Eijck, 2005; Oliver, Weaver, & Sargent, 2000; Rentfrow & Gosling, 2003; Sparks & Spirek, 1988). With regard to transportation, trait differences in empathy have been shown to increase transportation during film viewing (Hall & Bracken, 2011). Audience personality traits have also been found to have different effects on media preferences than they do on media enjoyment (Krcmar & Kean, 2005). Regarding spoilers and audience responses, two suggested traits that are especially relevant to the proposed mechanisms of processing fluency and suspense are the *need for cognition* and the *need for affect* (see discussions in Johnson & Rosenbaum, in press; Leavitt & Christenfeld, 2013). We will now further examine these two traits and the roles they could play in spoiled narratives' selection, enjoyment, and transportation.

Need for Cognition

Cacioppo and Petty (1982) defined the need for cognition as "the tendency for an individual to engage in and enjoy thinking" (p. 116). Individuals with a high need for cognition tend to elaborate more on the information provided to them, are more likely to be influenced by the quality of information than superficial heuristics, and will actively seek information beyond those messages that are presented to them (Verplanken, Hazenberg, & Palenéwen, 1992).

When looking at the need for cognition trait, an important concept to consider is processing fluency (the ease with which a text can be read and interpreted; Reber et al., 2004). The importance of processing fluency in predicting how spoilers influence enjoyment was shown by Leavitt and Christenfeld (2013), who found that knowing the outcome of a story in advance increased the perceived ease of reading, which in turn had a positive effect on their enjoyment

measure. In addition, processing fluency increases transportation, which positively impacts enjoyment (Vaughn, Childs, Maschinski, Niño, & Ellsworth, 2010). Hence, ease of processing (whether as the result of knowing the outcome of the story or due to something else) will lead to greater transportation and enjoyment (cf. Green et al., 2008).

When coupling the nature of the need for cognition trait with the notion of processing fluency, one could draw the conclusion that those high on this variable may prefer unspoiled stories. As individuals with a higher need for cognition will experience greater processing fluency, due to their ability to carefully analyze relevant message components (See, Petty, & Evans, 2009), knowing the outcome of a story may do little to increase processing fluency for these people. Subsequently, their preference and enjoyment may not hinge on knowing the outcome of a story, but instead depend on the actual narrative. In contrast, when considering processing fluency and low need for cognition, one could conclude that individuals with a lower need for cognition benefit the most from knowing the ending and thus prefer spoiled stories. These individuals do not enjoy elaborating, and thus do so as little as possible. Narrative conclusions can involve cognitive work for the audience, especially when plot twists or unforeseen outcomes require a reevaluation and reinterpretation of prior events (Friedman, 2006). In contrast, knowing the outcome of a plot in advance would aid processing fluency and avoid these rereadings and reworking of events in the mind of the recipient, perhaps a more appealing option for those low on need for cognition for whom familiarity with the ending of a story may enhance their experience of the story.

Moreover, resource matching theory, with its premise that people are most responsive to communication when "the amount of cognitive resources required to process a message neither exceeds nor falls short of what the recipient is capable of providing" (See et al., 2009, p. 881),

points to another link between need for cognition and spoilage. An unspoiled story may be a poor match with low need for cognition individuals, as it requires more cognitive resources to comprehend. In contrast, individuals high on need for cognition would not require advance knowledge of a conclusion in order to process fluently, and would instead relish wrestling with the narrative arc, its twist and turns, and the necessary reappraisals (cf. Friedman, 2006). Therefore, if only some individuals exhibit a preference for spoilers, it would be those low on need for cognition, as the spoiler provides assistance with understanding that is necessary for enjoyment of and transportation into entertaining narratives.

In addition, a greater need for cognition has been linked to a tendency to infer conclusions from a message. For example, those individuals with a high need for cognition exhibit a preference for persuasive messages with implicit rather than explicit conclusions, as they are more likely to infer conclusions about the message themselves (Martin, Lang, & Wong, 2003). This implies that individuals with a high need for cognition might prefer not knowing the outcome of a narrative, as it provides them with an opportunity to theorize about possible endings. This idea is further underlined by flow theory, as it argues that media experiences that present just enough of a cognitive challenge to match the individual's abilities would be especially enjoyable (Sherry, 2004).

These ideas are in line with the notion that challenging and complex tasks are more enjoyable than simple tasks for individuals with high need for cognition, while simple tasks are more enjoyable for those with low need for cognition (Cacioppo & Petty, 1982). Likewise, Knobloch-Westerwick and Keplinger (2008) found that high need for cognition individuals reported more enjoyment of moderately complex mystery stories than less complex mysteries, compared to those lower on the need for cognition. Hoffman (2006) appears to agree when she

claims that people with a higher level of education, and thus more developed cognitive capabilities, will likely enjoy new content more than content with which they are already familiar. This intrinsic interest in drawing conclusions and engaging in challenging thinking suggests than an unspoiled story will offer more satisfaction to people with high need for cognition, as they relish trying to understand, and perhaps guess at, how the story will progress. Given these characteristics of low and high need for cognition individuals, we can formulate our first hypothesis as follows.

> H1: An interaction will exist between spoilers and need for cognition, such that spoilers will have a negative effect for those high on need for cognition and a positive effect for those low on need for cognition, for the outcomes of (a) selective preference, (b) enjoyment, and (c) transportation.

Conversely, when it comes to narrative uncertainty and one's media experience, a greater need for cognition might lead to positive effects of spoilers on one's enjoyment. Knowing the outcome of a story can provide the context needed to understand and interconnect the events in the story that lead up to the climax and resolution, making it easier to process information related to the story (Leavitt & Christenfeld, 2013). This provides the individual with a more coherent mental model of the narrative, allowing for more attention to and appreciation of details in the story (cf. Hoffman, 2006). This ability to elaborate on details that are relevant to the plot may appeal more to individuals with a high need for cognition, as it allows them process the story and its various meanings in more depth, which could in turn increase their enjoyment as well as their transportation. Accordingly, Dai and Wang (2007) found that increased textual comprehension of a narrative partially mediated the relationship between need for cognition and positive interest in the story, suggesting that a better understanding of the story (which could be the result of

spoilers) leads to an increased interest in the narrative for those with a high need for cognition. Therefore, individuals with higher levels of need for cognition may have more interest in, and more rewarding responses to, narratives that have been spoiled, as suggested by Leavitt and Christenfeld (2013). Those low on cognition might not receive these suggested processing benefits of spoilers, as they are less likely to make mental connections and elaborate on the story's events, and thus experience less enjoyment as well as transportation, and as such may prefer unspoiled stories. These previous findings lead us to offer a second hypothesis in direct competition with the first hypothesis.

> H2: An interaction will exist between spoilers and need for cognition, such that spoilers will have a positive effect for those high on need for cognition and a negative effect for those low on need for cognition, for the outcomes of (a) selective preference, (b) enjoyment, and (c) transportation.

Need for Affect

Need for affect can be best described as the "affective counterpart to the need for cognition" (Appel & Richter, 2010, p. 107), and is usually seen as an individual's tendency to seek out (approach motivation) or steer clear (avoidance motivation) of emotional situations or stimuli (Maio & Esses, 2001). The needs for cognition and affect are not necessarily two sides of the same coin, although research has found the two to be positively correlated (Maio & Esses, 2001).

Need for affect has been linked to various outcomes, with some of these studies pointing to the possible relationship between need for affect and the selection and enjoyment of spoiled stories. One compelling argument for the impact of need for affect on enjoyment is the finding that need for affect does not just refer to a desire to engage with emotions and situations creating

emotions (both negative, positive, and ambivalent), but also the tendency to evaluate the emotions people experience in a more positive light (so-called "meta-emotions") (Bartsch, Appel, & Storch, 2010, p. 181). People with a high score on need for affect were more likely to evaluate the emotions experienced during the screening of a film as positive (Bartsch et al., 2010), while people who were characterized by a low need for affect were less likely to enjoy the emotions they experienced upon watching a movie. Considering excitation-transfer theory, which accounts for how uncertainty and suspense lead to enjoyment by increasing psychological and physiological arousal (Zillmann, 1971; Zillmann, Hay, & Bryant, 1975), individuals with a higher need for affect, and thus a greater capacity and desire for emotional stimulation, should therefore prefer more suspense-generating arousal (i.e., unspoiled narratives) in the pursuit of enjoyment.

This prediction is also in keeping with the tenets of mood management theory (Zillmann, 1988). Just as those who are understimulated will seek arousing media content to bring their mood back to homeostasis, those high on need for affect should seek more stimulating fare to maintain their optimal arousal level. In this way, unspoiled stories, with their increased levels of uncertainty and subsequently greater suspense, should be more enjoyable, and more sought out by high need for affect individuals. Although recent research has investigated this relationship between need for affect and selectivity, it did not consider narrative uncertainty, and mainly focused on the nature of the media content, linking need for affect to a greater tendency to choose emotional movies over non-emotional movies (Appel, 2008, in Bartsch et al., 2010; Maio & Esses, 2001).

Moreover, need for affect has also been shown to have a positive impact on transportation (Appel & Richter, 2010). Individuals who have a greater desire to experience

emotional situations are more likely to be transported into the narrative, most likely because transportation provides these individuals the emotional experiences they prefer. If, as Zillmann (1991) argued, suspense and arousal are vital to transportation, one could infer that people with a high need for affect are more likely to be transported into unspoiled stories, as narrative uncertainty will increase a sense of suspense. This idea is underlined by earlier research (Johnson & Rosenbaum, in press), which found that unspoiled stories showed slightly greater cognitive transportation than unspoiled stories. Based on these ideas, we formulate our third hypothesis.

> H3: An interaction will exist between spoilers and need for affect, such that spoilers will have a negative effect for those high on need for affect and a positive effect for those low on need for affect, for the outcomes of (a) selective preference, (b) enjoyment, and (c) transportation.

Other Individual Differences

Several traits have also been shown to influence audience responses to narrative entertainment and are relevant to the influence of spoilers. For example, Knobloch-Westerwick and Keplinger (2006) identified trait self-esteem as playing a role in how readers make sense of and enjoy uncertain mystery stories, and Dal Cin, Zanna, and Fong (2004) articulated individual differences that exist in narrative transportation potential, i.e., transportability. Also possibly relevant is the need for closure (Webster & Kruglanski, 1994), which is indicative of individuals who are intolerant of uncertain and open-ended possibilities.

A final type of individual difference is not a trait, per se, but rather variability in the overall affinity for narratives or short stories in particular. Leavitt and Christenfeld (2013) tested three such variables as potential moderators and found no interactions (general enjoyment of fiction, frequent reading of fiction for fun, and preference for entertainment versus insight, all *p*s

> .305). However, more frequent experience with the short story form and related print narratives is variable and has the potential to shape entertainment expectations and responses to spoilers (cf. Sherry, 2004). Therefore, we posed the following research question.

RQ: Will the interactions between spoilers and need for closure, self-esteem, transportability, or fiction reading frequency influence (a) selective preference for, (b) enjoyment of, and (c) transportation into stories?

Method

Participants

The study was offered for course credit to undergraduate students enrolled in courses at a medium-sized historically black university in the southeastern U.S. A total of 368 respondents participated in the study. Nearly two-thirds (239) were female; 69.8% were freshman, 15.5% sophomores, and 14.4% were juniors or seniors; 95.7% identified as Black/African American, 3.3% as Multiracial, and one person each identified as Asian, White/Caucasian, or Other. The mean age was 19.06 (SD = 2.16), ranging from 18 to 42.

Stimuli

Short stories were adopted from an earlier study of spoilers' effects on enjoyment, audience response, and transportation (Johnson & Rosenbaum, in press), including several stories used in narrative research elsewhere (e.g., Green & Brock, 2000; Leavitt & Christenfeld, 2011). For each story, two previews were written – an unspoiled and a spoiled preview. These two versions were subjected to successful pretesting (Johnson & Rosenbaum, in press) with a reliable five-item scale developed to measure perceived spoilage (e.g., "I know how the story is going to end," 1 = *Strongly Disagree* to 7 = *Strongly Agree*). All manipulations had their desired

effects for each story, with *d*s ranging from 0.40 to 1.44. The story previews were used as stimuli in two experimental phases: one involving a choice task, one involving a reading task.

The first experimental phase consisted of previews for eight short stories. These story previews ($M_{\text{word count}}$ = 63.69, *SD* = 2.50), presented in a choice task, were divided into two sets. The first set included the stories "Horseman in the Sky," "Lamb to the Slaughter," "Going, Going, Gone," and "One True Love." The second set included "Heirs and Orphans," "Night Coming," "Gleason," and "The Lying Bee." This allowed for testing the relative preference for stories by manipulating which set consisted of spoiled or unspoiled stories. Participants were randomly assigned, in a between-subjects design, to have either set 1 spoiled and set 2 unspoiled, or else set 1 unspoiled and set 2 spoiled. The previews from each set were intermingled, alternated in their presentation, and were counterbalanced in their order, to avoid sequence effects. Therefore, each participant saw both spoiled and unspoiled previews, in a within-subjects design. Following the recommendations of Judd, Kenny, and McClelland (2001), this within-subjects factor was collapsed as a difference score in order to facilitate moderation tests. Furthermore, by randomly assigning whether set 1 or set 2 would be spoiled, a between-subjects experimental factor was retained, which aided interpretation as well as comparability to the spoiler induction in the next phase, which tested enjoyment and transportation during reading.

The stimuli, used in the second phase reading task, was comprised of three full short stories, "The Sniper," "Two Were Left," and "The Death of a Clerk" ($M_{\text{word count}}$ = 892.67, *SD* = 212.65). Each story was accompanied by a preview ($M_{\text{word count}}$ = 63.83, *SD* = 1.94), similar to those used in the choice task, which was successfully manipulated to either spoil the story's ending or leave it unspoiled. Each participant was randomly assigned to read one of the three stories, which was prefaced, in large type on a cover page, by a preview that was randomly

assigned as spoiled or unspoiled. This experimental manipulation of spoilers was independent of the other experimental spoiler manipulation in the previous choice task. The spoiler conditions and corresponding story presentations for the choice and reading tasks were counterbalanced with a Latin Square design.

Procedure

Participants completed informed consent forms, and they then received verbal instructions both reiterating that the research was testing evaluations of and responses to fictional short stories and requesting that participants read the material, follow printed directions, and complete questionnaire items carefully.

Participants were first presented with basic demographic questionnaire items (age, gender, class rank, and ethnicity). Next, participants were presented with the choice task, in which eight short story previews were rated on how much the respondent would like to read each one "right now." Stories from the two sets were mixed together in alternating order, and either the first set of stories or the second set of stories was represented by spoiled previews, in a between-subjects manipulation. As mentioned above, the alternating previews were also counterbalanced in their order. This manipulation served as the first experimental condition.

The second phase of the study consisted of a reading task. In this part of the experiment, participants first read a story preview for one of three short stories, randomly assigned as spoiled or unspoiled, a between-subjects experimental manipulation independent from the manipulation of spoiled and unspoiled story previews in the choice task. The preview was followed by the corresponding full story. The study then immediately continued with measures of enjoyment and transportation for the full story. Finally, participants indicated how frequently they read fiction

for pleasure and completed trait inventories. They were then thanked and awarded participation credit.

Measures

Selective preference. For each story preview in the choice task, participants indicated how much they "would like to read this story right now" on a scale from 1 = *Not At All* to 7 = *Very Much*. To calculate if participants had a selective preference for choosing one set of stories over the other, the average rating for each set was computed, and the difference between set 1 and set 2 was then computed (Judd et al., 2001). Overall, and irrespective of which set was spoiled, the previews from set 1 (M = 4.77, SD = 1.02) were somewhat preferred to those in set 2 (M = 4.35, SD = 1.15). A positive difference score indicated a preference for stories in set 1, while a negative difference score indicated a preference for stories in set 2. A range of –2.50 to 4.00 was found for this measure, M = 0.42, SD = 1.09, indicating variability in preferences.

Enjoyment. The INT-ENJ scale (McAuley, Duncan, & Tammen, 1989; Ryan, 1982) was used to measure enjoyment of the short story that participants read, on a scale from 1 = *Strongly Disagree* to 7 = *Strongly Agree.* The scale included items such as "Reading the story was fun." Its five items were reliable, α = .91, M = 3.85, SD = 1.58.

Transportation. The study utilized Green and Brock's (2000) transportation scale to measure transportation into the story. Using 15 items (e.g., "I could picture myself in the scene of the events described in the story"), including four that were tailored specifically to the protagonist, antagonist, setting, and secondary characters of the given short story, respondents could indicate their extent of transportation, on a scale from 1 = *Strongly Disagree* to 7 = *Strongly Agree*. The scale was reliable, α = .85, M = 3.65, SD = 1.03. It also produced reliable

subscales of cognitive, $\alpha = .82$, $M = 4.25$, $SD = 1.64$, and imagery transportation, $\alpha = .90$, $M = 3.89$, $SD = 1.66$, but not a reliable affective transportation subscale, $\alpha = .38$, $M = 2.44$, $SD = 1.00$.

Need for cognition. The 18-item scale developed by Cacioppo and Petty (1982) was used to measure trait differences in the need for cognition. This measure utilizes a five-point scale ranging from 1 = *Extremely Uncharacteristic of Me* to 5 = *Extremely Characteristic of Me*, and items such as "I only think as hard as I have to." It was reliable, $\alpha = .82$, $M = 3.27$, $SD = 0.58$.

Need for affect. In order to measure need for affect, the 10-item short form of the need for affect questionnaire (Appel, Gnambs, & Maio, 2012) was used to measure trait differences in the need for affect. It features items about both approach and avoidance of emotion. Respondents were asked to respond to items such as "Emotions help people to get along in life" on a scale from 1 = *Strongly Disagree* to 7 = *Strongly Agree*. The measure was reliable, $\alpha = .73$, $M = 4.28$, $SD = 0.98$.

Need for closure. Two most relevant subscales of the need for closure scale (Webster & Kruglanski, 1994) were used, the predictability and ambiguity scales, totaling 17 items. Respondents used a six-point scale, ranging from 1 = *Strongly Disagree* to 6 = *Strongly Agree*. An example of an item used is, "I don't like situations that are uncertain." Reliability was good, $\alpha = .77$, $M = 4.06$, $SD = 0.67$.

Self-esteem. The 10-item self-esteem scale (Rosenberg, 1965) was used. This measure asks participants to respond to items such as "I feel that I have a number of good qualities" using a scale ranging from 1 = *Strongly Disagree* to 4 = *Strongly Agree.* The measure was found to be reliable, $\alpha = .82$, $M = 3.44$, $SD = 0.49$.

Transportability. Individual differences in narrative transportation were measured with the transportability scale (Dal Cin et al., 2004), a 20-item measure that recorded responses on a scale from 1 = *Strongly Disagree* to 9 = *Strongly Agree*. The scale used items such as "I get mentally involved with the story." The measure showed good reliability, $\alpha = .90$, $M = 5.68$, $SD = 1.38$.

Fiction reading frequency. A single-item measure asked participants to indicate how often they "read novels or other fiction stories for pleasure," with response options of 1 = *Never*, 2 = *Rarely*, 3 = *Sometimes*, 4 = *Often*, 5 = *Very often.* Participant responses ranged from 1 to 5, with the average participant reading fiction sometimes, $M = 2.93$, $SD = 1.16$.

<Insert Table 1 About Here>

Covariates. The discussion surrounding the relationship between need for cognition, need for affect, enjoyment, and transportation, and correlates such as sex and age is still ongoing. Regarding gender and need for affect, Maio and Esses (2001) found that women displayed a higher need for affect than men, while Bartsch et al. (2010) obtained conflicting results. In addition, there is reason to believe that need for affect may decrease with age (Maio & Esses, 2001). Similarly, need for cognition has been inconsistently linked to sex. Tanaka, Panter, and Winborne (1988) uncovered that women scored consistently higher, but Sadowski (1993) found that the need for cognition short scale was quite gender neutral.

Likewise, conflicting results are evident for the influences of sex on narrative transportation (Green, 2004; Green & Brock, 2000; Green et al., 2008) and enjoyment (Oliver & Bartsch, 2010; Oliver et al., 2000; Ravaja, 2009; Tamborini et al., 2011; Vorderer, Klimmt, & Ritterfeld, 2004). Additionally, media users who enjoy watching the same content repeatedly (cf. spoilers) tend to be younger (Hoffmann, 2006). In short, it is necessary to account for sex and

age as controls in the statistical models testing the hypotheses. Zero-order correlations for study variables are reported in Table 1.

Results

We first examined the main effects of narrative spoilers on selective preference, enjoyment, and transportation with independent-samples t-tests. The results indicated that no main effect was evident for selective preference, $t(366) = -1.47$, $p = .14$, $M_{\text{first set spoiled}} = 0.50$, $SD = 1.08$, versus $M_{\text{second set spoiled}} = 0.33$, $SD = 1.09$, $d = 0.16$, 95% CI [0.00, 0.31]. The between-subjects manipulation of which set of previews (either set 1 or set 2) was spoiled did not affect which set was preferred for reading. Framed differently, a paired-samples t-test showed that spoiled previews ($M = 4.60$, $SD = 1.12$) were preferred as much as unspoiled previews ($M = 4.52$, $SD = 1.10$), $t(367) = -1.34$, $p = .18$, showing no within-subjects difference.

Likewise, for the between-subjects manipulation of full stories, independent-samples t-tests showed that there were no main effects for enjoyment, $t(364) = 1.03$, $p = .31$, $M_{\text{spoiled}} = 3.77$, $SD = 1.60$, versus $M_{\text{unspoiled}} = 3.94$, $SD = 1.56$, $d = 0.11$, 95% CI [−0.12, 0.34]; or for transportation, $t(364) = 0.22$, $p = .83$, $M_{\text{spoiled}} = 3.64$, $SD = 1.01$, versus $M_{\text{unspoiled}} = 3.66$, $SD = 1.05$, $d = 0.02$, 95% CI [−0.13, 0.17]. ANCOVA models employing the covariates of age and sex yielded similar results. In short, there were no significant overall differences between spoiled and unspoiled stories across the full sample for either preference, enjoyment, and transportation.

Next, need for cognition, need for affect, and the traits specified in the RQ were examined as possible moderators of narrative spoilers, with spoiler manipulations dummy coded as 0 = unspoiled, 1 = spoiled. Hierarchical multiple regression models were used to test the moderating roles of these individual differences, using sex and age as covariates. All regression coefficients are reported as unstandardized values, and appear along with effect sizes in Table 2.

For each dependent variable, initial models are presented for each trait of interest, without interaction terms; subsequent models, each presented to the right of its initial model, introduce interaction terms in a second hierarchical regression block. Additionally, the PROCESS macro (Hayes, 2013) for SPSS was used to probe significant or marginal interactions, in order to aid interpretation of results by identifying statistically significant regions of those interactions.

<Insert Figure 1 About Here>

A marginally significant interaction was present between the need for cognition and spoilers, but only for predicting selective preference for stories, $b = -0.38$, $se = 0.19$, $t(360) = -1.96$, $p = .051$, 95% CI [−0.76, −0.002], $\Delta R^2 = .01$. The Johnson-Neyman technique was used to probe the interaction, which revealed that those low on need for cognition (< 3.18, which included 48.22% of the sample) showed a significant positive preference for spoiled stories, providing support for hypothesis 1a rather than 2a. Figure 1 illustrates the effect of spoilers on selective preference for those individuals at the mean score for need for cognition and those one standard deviation above and below the mean. In contrast to that effect on selective preference, there was no significant moderating influence of need for cognition on enjoyment, $b = -0.18$, $se = 0.28$, $t(357) = -0.66$, $p = .51$, 95% CI [−0.73, 0.36], $\Delta R^2 = .001$, or transportation, $b = -0.03$, $se = 0.18$, $t(357) = -0.15$, $p = .88$, 95% CI [−0.38, 0.33], $\Delta R^2 = .0001$, for full stories. Additionally, there was no interaction between need for cognition and spoilers to predict cognitive transportation, $p = .59$, or other transportation subscales. Therefore, hypotheses 1b/2b and 1c/2c were not supported. It would thus appear that need for cognition moderated the effect of spoilers on choice, such that those with a low need for cognition held a selective preference for spoilers, but did not enjoy or transport into spoiled stories more. The implications for these findings will be examined in the discussion.

With regard to need for affect, the regression model identified no significant interaction for selective preference, $b = 0.02$, $se = 0.12$, $t(359) = 0.19$, $p = .86$, 95% CI [−0.21, 0.25], $\Delta R^2 = .0001$, and hypothesis 3a therefore was not supported. However, when regressing enjoyment, there was a significant interaction between need for affect and spoilers, $b = -0.33$, $se = 0.17$, $t(356) = -2.00$, $p = .047$, 95% CI [−0.65, −0.005], $\Delta R^2 = .01$. The Johnson-Neyman technique found that participants high on need for affect (> 4.94, which was 24.03% of the sample) reported greater enjoyment when their story was unspoiled, supporting hypothesis 3b. Figure 2 illustrates this relationship. In contrast, need for affect did not moderate the effect of spoilers on transportation, $b = -0.13$, $se = 0.11$, $t(356) = -1.23$, $p = .22$, 95% CI [−0.35, 0.08], $\Delta R^2 = .004$, leaving hypothesis 3c unsupported. Likewise, there was no moderating effect on cognitive transportation, $p = .92$. Therefore, need for affect only moderated the effect of spoilers on enjoyment, where a greater need was associated with more enjoyment of unspoiled stories than spoiled stories.

<Insert Figure 2 About Here>

In keeping with the research question, a number of additional dispositional variables were examined as possible moderators of spoilers' effects on selective preference, enjoyment, and transportation. The traits of self-esteem, transportability, and need for closure yielded no significant interactions with spoilers, ps > .30, ΔR^2s < .003. However, fiction reading frequency did emerge as a moderator for spoiler effects. While there was no interaction with selective preference, $b = 0.04$, $se = 0.10$, $t(344) = 0.36$, $p = .72$, 95% CI [−0.16, 0.23], $\Delta R^2 = .0004$, showing no effect for RQa, we were able to observe a marginal interaction between spoiler condition and fiction reading frequency in predicting story enjoyment, $b = -0.26$, $se = 0.14$, $t(342) = -1.81$, $p = .071$, 95% CI [−0.53, 0.02], $\Delta R^2 = .01$. Probing the interaction revealed that

those who reported more frequent reading of fiction for pleasure reported more enjoyment of unspoiled stories. Specifically, those scoring above 3.80 on the fiction reading frequency item (29.31% of participants) enjoyed unspoiled stories more, answering RQb. The interaction between reading frequency and spoilers is presented in Figure 3. Finally, regarding RQc, there was no moderating influence of fiction reading frequency on spoilers' effect on transportation, $b = -0.02$, $se = 0.09$, $t(342) = -0.18$, $p = .86$, 95% CI [−0.20, 0.17], $\Delta R^2 = .0001$, or on its cognitive subscale, $p = .52$. Therefore, much like those high on need for affect, individuals who read fiction more frequently experienced greater enjoyment of unspoiled than spoiled stories.

<Insert Figure 3 About Here>

Discussion

This study examined the role of individual differences in explaining whether narrative spoilers increase or decrease selective preference, enjoyment, and transportation, given the previous conflicting findings on spoiler effects. The presence of spoilers was experimentally manipulated for both the selection of short stories and the reading of a full short story. Given the extant literature on need for cognition, competing hypotheses were presented as to how individuals varying on this trait would respond to spoilers. Previous research into a second trait, need for affect, suggested more positive responses to unspoiled narratives would be evident for those high on this variable. Finally, a research question was posed regarding the role of other possible moderating traits, including fiction reading frequency, in receptivity to spoilers.

The results indicated that need for cognition played a role at the selection stage, while need for affect and fiction reading frequency both impacted enjoyment. This suggests that decision-making about the selection and consumption of entertainment media, at least in this case, is driven by different considerations than those that influence the enjoyment of media.

Story choice may be influenced by need for cognition, but that trait does not appear to impact ultimate enjoyment or transportation into the story. Instead, factors like need for affect or regular reading of fiction influence how enjoyable a spoiled versus unspoiled story will be.

Specifically, those low on need for cognition preferred spoiled stories, while those high on need for affect enjoyed unspoiled stories more. These results are somewhat consistent with each other, given the positive correlation between need for cognition and need for affect in this sample and the literature. Furthermore, a high frequency of reading fiction for pleasure was, much like need for affect, associated with higher enjoyment of unspoiled short stories. However, those two moderators were not correlated with each other, so they may reflect different processes in the enjoyment of unspoiled narratives.

The finding that a lower need for cognition led to a selective preference for spoiled stories but did not impact enjoyment can be attributed to several possible explanations. One factor to consider when it comes to story selection is the importance of framing. Previous research into the need for cognition trait has revealed that people with a high need for cognition are less likely to be swayed by the way in which a choice is framed (Smith & Levin, 1996), as the amount and extent of thought that these types of people put into their decision undermines any framing bias a message may hold. When extending this to the notion of spoilage and story selection, it would seem that a preview would not be enough to sway the preferences of individuals with a high need for cognition, while those low on need for cognition are more likely to choose based on advance information such as a preview and how much or how little it gives away about the story. High need for cognition individuals are perhaps more immune to using heuristics such as these to inform choice, as seen in the present findings, where they did not

exhibit a clear preference for spoiled or unspoiled previews like the low need for cognition individuals did.

The finding that it was individuals low on need for cognition that reported a selective preference for spoiled stories is consistent with processing fluency theory and resource matching theory (Reber et al., 2004; See et al., 2009). When need for cognition is lower, the selective preference for unspoiled stories is dramatically lower, and the preference for spoiled stories is slightly greater (Figure 1). When choosing between stories, low need for cognition individuals appear to have found spoiled stories as potentially more comprehensible and more in keeping with their preferred level of cognitive processing. However, these expected benefits of easier processing due to a spoiler did not appear to translate into greater enjoyment or transportation.

Interestingly, the finding that the interaction between need for cognition and spoilers was absent when predicting enjoyment and transportation appears to indicate that the gratifications (i.e., ease of processing) that individuals with a low need for cognition seek, based on the frame, is somehow not the gratifications they obtain when reading the full spoiled story (cf. Palmgreen, Wenner, & Rayburn, 1980). The inconsistency between selective preference and subsequent enjoyment seems to indicate that, regardless of which factors play a role in an individual's preference for spoiled or unspoiled stories, people are apparently far less capable of effectively forecasting their enjoyment than one might assume (cf. Wilson & Gilbert, 2005). So while individuals might believe that their predictions of a situation are accurate, this could be the result of hindsight bias more than solid forecasting (cf. Wright, van der Heijden, Bradfeld, Burt, & Cairns, 2004).

Another avenue to consider is the possibility that while the brief previews which were used to assess preference were perceived as interesting and relevant by the participants, the full

stories utilized for establishing enjoyment and transportation were deemed of low personal relevance by respondents with both a high and a low need for cognition. According to Haugtvedt, Petty, and Cacioppo (1992), whenever people with a high need for cognition perceive a situation to contain little personal relevance they will process the information presented to them in that situation in a manner similar to people with a low need for cognition. This could explain why, when it came to enjoyment and transportation, need for cognition did not have any sort of impact. This finding thus also points to the need to examine the role played by the perceived relevance of the stimuli in the effect of their interaction with personality traits. For example, fans of an ongoing television or book series may be far more invested in the presence of spoilers than individuals encountering a stand-alone narrative text for the first time. Future studies should utilize more diverse stimuli to assess to what extent different types of spoiled media appeal to audience members.

The second finding of this study, that individuals with a high need for affect enjoyed unspoiled stories more than spoiled stories, is in line with the excitation transfer theory discussed earlier (Zillmann, 1971). This theory proposes that uncertainty about a story outcome leads to an increase in enjoyment due to an increase in arousal. We proposed that people with a high need for affect would thus prefer unspoiled stories, as they would lead to more suspense-generated arousal. This was supported by our findings for enjoyment: When need for affect was greater, the enjoyment of unspoiled stories was greater as well. Interestingly, spoiled stories were enjoyed fairly equally across the range of need for affect (Figure 2).

Our results also showed that people who read fiction frequently enjoyed unspoiled more than spoiled stories (Figure 3). Much like the need for affect, it appears that the enjoyment of spoiled stories remains fairly constant, but that rather unspoiled stories benefit from the

individual differences. Interestingly, the one other experimental study (Leavitt & Christenfeld, 2013) that investigated a similar relationship found no interaction between spoilers and enjoyment of fiction in general. This finding, however, could be the result of the fact that, as mentioned previously, Leavitt and Christenfeld used a single-item measure to assess enjoyment, which could result in low content validity, with the scale failing to appropriately measure enjoyment, unlike a reliable and valid measure like the INT-ENJ used in the present study. Possible explanations for our findings could be, on the one hand, that one of the uses frequent readers have for reading is the element of suspense and surprise provided by an unspoiled story. On the other hand, it is also possible that frequent readers, because they read so much, desire something new every time they read.

The current findings help reconcile earlier research that found both positive (Leavitt & Christenfeld, 2011, 2013) and negative (Johnson & Rosenbaum, in press) effects of spoilers on enjoyment. The present study suggests that spoiler effects are conditioned on individual differences in the needs for cognition and affect, as well as frequency of narrative exposure; thus it is likely that significant differences in these traits existed between previous study samples. Unfortunately, this is the first spoiler study to measure traits, and full demographics were not reported by Leavitt and Christenfeld (2011, 2013), so it is only possible to speculate. However, considering that the present study was carried out a medium-sized university in the Southeast, as opposed to a large research-intensive university on the opposite side of the country, the conclusion that differences in population could play a role in results is not completely unfounded.

In spite of a strong relationship between transportation and enjoyment and their common co-occurrence (Green et al., 2008; Vaughn et al., 2010), our study did not uncover any moderated effects on transportation, despite revealing moderated effects on enjoyment. One

possible explanation is that although need for affect correlates with transportation (Appel & Richter, 2010), and uncertainty appears to contribute to arousal and subsequent enjoyment for those high on need for affect, it may not be as necessary for the experience of transportation. Transportation refers to the extent to which media users "lose" themselves in the content, and it is would seem that this ability to lose oneself is less affected by spoilers, regardless of traits. A previous study (Johnson & Rosenbaum, in press) hinted at this, when it found that while two subscales of transportation (affective and imagery), as well as the transportation measure as a whole, were unaffected by spoilers, unspoiled stories demonstrated a greater level of cognitive transportation. In contrast, post-hoc analyses of the present dataset found no main or moderated effects of spoilers on cognitive transportation, *p*s > .52, or other dimensions of transportation. This inability to detect or explain spoiler-induced differences in transportation in the present study suggests that it may be too early to make blanket statements about these relationships, and points to a need for further research into whether transportation is in fact less influenced by spoilers and narrative uncertainty (cf. Green et al., 2008) than enjoyment, and if so, why this is the case.

This study's findings provide several interesting insights into the relationship between personality traits and spoilers, yet the study design does have some limitations. The use of a student sample, while commonly used to test responses to entertainment narratives, limits the ability to generalize to other populations. Another limitation is the order in which the experiment was carried out. It is possible that by measuring personality traits after the experiment, respondents were made aware that the study was about liking stories, and therefore responded to these measures in a socially desirable manner. However, traits measures are known to be relatively stable. Furthermore, measuring traits prior to the induction could have sensitized

respondents to the nature of the study instead, which could have had a negative impact on our findings. Future research should control for these possibilities by varying the presentation order of the study.

An additional limitation is the use of a handful of stimuli: Each respondent only read eight previews and one full story. Although this helps avoid study fatigue, it restricts our ability to generalize findings to other stories and other forms of narrative entertainment, and may account for the small effect sizes. The stories that were used in our study were generally considered "classics," and might therefore not have been perceived as personally relevant by our sample, as discussed earlier. The present study and all extant experimental studies of spoilers (Johnson & Rosenbaum, in press; Leavitt & Christenfeld, 2011, 2013) reported relatively small effect sizes (typically *d*s of between 0.15 and 0.35, or $\Delta R^2 = .01$). While the present study had good statistical power to detect small effects of $d = .30$ (power = .82) or $\Delta R^2 = .02$ (power = .77), it was underpowered to detect even smaller effects of $d = .20$ (power = .48) or $\Delta R^2 = .01$ (power = .48), which may account for marginal findings. The small effect sizes seen across multiple studies, combined with the lack of consistency in the relationship between spoilers, selective preference, enjoyment, and transportation in the present study, indicate that further research into these relationships is warranted. It is not clear whether this is because spoilers have small, contingent effects, or because of other shared factors such as the reliance on printed short stories.

Accordingly, future studies should examine the impact of the medium, such as print versus video (cf. Green et al., 2008), as well as impact of the genre of the stories (cf. Oliver & Bartsch, 2010) on the interaction between personality traits and spoilers. For example, people high on need for affect might especially enjoy their horror movies when unspoiled, even more than they enjoy other unspoiled content, given their desire for intense arousal. The length of a

story is another factor that future research should take into account, as industry research has uncovered that the length of a mystery novel is correlated to the number of readers who skip to the end to find out the ending, or "self-spoil" (Streitfeld, 2013). The effect of a spoiler may also vary depending on the timing or nature of the revealed plot point, and this is something that should be explored in future studies. In addition, future investigations should, as described above, select stories that are more intrinsically engaging for the research population. Future research could also examine the scenarios in which individuals encounter spoilers. For example, there may be less aversion to spoilers when individuals exercise their own decisions about viewing them, yet aversive reactions may result when spoilers are foisted on unwitting recipients. Psychological reactance theory (Brehm, 1966; Burgoon, Alvaro, Grandpre, & Voulodakis, 2002) could account for this difference, and it is possible that spoilers delivered in this uncontrollable manner account for lay theories about harmful spoilers.

In conclusion, this study shows that although spoilers may not always "spoil" one's experience, they do, in keeping with what previous studies (Leavitt & Christenfeld, 2011, 2013) found, matter. The present results account for earlier findings by demonstrating that, depending on an individual's personality traits, a spoiler can have differential effects on enjoyment of, or even one's desire to read, a narrative. Furthermore, the larger finding that the interactions between personality traits and spoilers do not have similar impacts on selective preference and enjoyment indicates there are distinct processes at play when selecting versus reading a story. The impact of spoilers on the audience's experience is thus somewhat individualized, and spoilers do not have a universally positive or negative impact on the audience's experience. In fact, while some audiences might not be affected by spoilers, or might actually prefer to know how a story turns out, as far as other audiences are concerned, the development of online spoiler

detectors (Boyd-Graber et al., 2013; Nakamura & Komatsu, 2012) is a very useful endeavor. In short, personality traits interact with spoilers to impact the audience experience, and future research can continue to unravel how individual differences affect audience responses to entertainment spoilers.

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Table 1

Zero-Order Correlations Between Study Variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Preference										
2. Enjoyment	.18***									
3. Transportation	.22***	.69***								
4. Need for Cognition	.13*	.18***	.21***							
5. Need for Affect	.02	.14**	.10*	.15**						
6. Need for Closure	.14**	−.09#	−.05	−.21***	−.02					
7. Self-Esteem	.07	.06	.06	.16**	.24***	.03				
8. Transportability	.26***	.21***	.43***	.32***	.15**	.01	.10#			
9. Fiction Reading	.16**	.03	.11*	.23***	−.01	−.01	−.03	.46***		
10. Female	.25***	−.20***	−.16**	.03	.05	.07	.10*	.13*	.32***	
11. Age	.06	.05	.05	.09#	.08	−.02	.03	−.01	.09	−.02

Note. $N = 368$; #$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$. "Preference" indicates the mean rating of both preview sets 1 and 2.

Table 2

Multiple Regression Models for Testing Moderation of Spoilers by Traits

	Selective Preference		Enjoyment		Transportation	
	b (*se*)	*b* (*se*)	*b* (*se*)	*b* (*se*)	*b* (*se*)	*b* (*se*)
Age	0.01 (0.03)	0.01 (0.03)	0.02 (0.04)	0.03 (0.04)	0.01 (0.02)	0.01 (0.02)
Sex	−0.45 (0.12)***	−0.43 (0.12)***	−0.71 (0.17)***	−0.71 (0.17)***	−0.38 (0.11)***	−0.38 (0.11)***
Spoiler	0.19 (0.11)#	1.43 (0.64)*	−0.16 (0.16)	0.43 (0.92)	−0.01 (0.10)	0.08 (0.60)
NfC	0.11 (0.10)	0.30 (0.14)*	0.50 (0.14)***	0.59 (0.19)**	0.37 (0.09)***	0.39 (0.13)**
Spoiler*NfC		−0.38 (0.19)#		−0.18 (0.28)		−0.03 (0.18)
Model R^2	.048**	.058***	.082***	.083***	.075***	.075***
ΔR^2		.010#		.001		.0001
Age	0.01 (0.03)	0.01 (0.03)	0.03 (0.04)	0.03 (0.04)	0.02 (0.02)	0.02 (0.02)
Sex	−0.46 (0.12)***	−0.46 (0.12)***	−0.70 (0.17)***	−0.70 (0.17)***	−0.35 (0.11)**	−0.36 (0.11)**
Spoiler	0.18 (0.11)	0.09 (0.51)	−0.17 (0.16)	1.24 (0.73)#	−0.02 (0.11)	0.56 (0.48)
NfA	0.04 (0.06)	0.03 (0.08)	0.23 (0.08)**	0.39 (0.11)***	0.11 (0.05)*	0.17 (0.07)*
Spoiler*NfA		0.02 (0.12)		−0.33 (0.17)*		−0.13 (0.11)
Model R^2	.046**	.046**	.067***	.078***	.039**	.043**
ΔR^2		.0001		.010*		.004
Age	0.002 (0.03)	0.002 (0.03)	0.02 (0.04)	0.01 (0.04)	0.01 (0.03)	0.01 (0.03)
Sex	−0.46 (0.13)***	−0.46 (0.13)***	−0.81 (0.18)***	−0.79 (0.18)***	−0.50 (0.12)***	−0.50 (0.12)***
Spoiler	0.17 (0.12)	0.07 (0.31)	−0.18 (0.16)	0.57 (0.45)	−0.01 (0.11)	0.04 (0.30)
FRF	0.03 (0.05)	0.01 (0.07)	0.14 (0.07)#	0.26 (0.10)*	0.16 (0.05)**	0.17 (0.07)*
Spoiler*FRF		0.04 (0.10)		−0.26 (0.14)#		−0.02 (0.09)
Model R^2	.042**	.042*	.060***	.069***	.061***	.061***
ΔR^2		.0004		.009#		.0001

Note. Spoiler manipulations coded as 0 = unspoiled, 1 = spoiled; Sex coded as 0 = male, 1 = female; NfC = need for cognition; NfA = need for affect; FRF = fiction reading frequency. Unstandardized coefficients. #$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$.

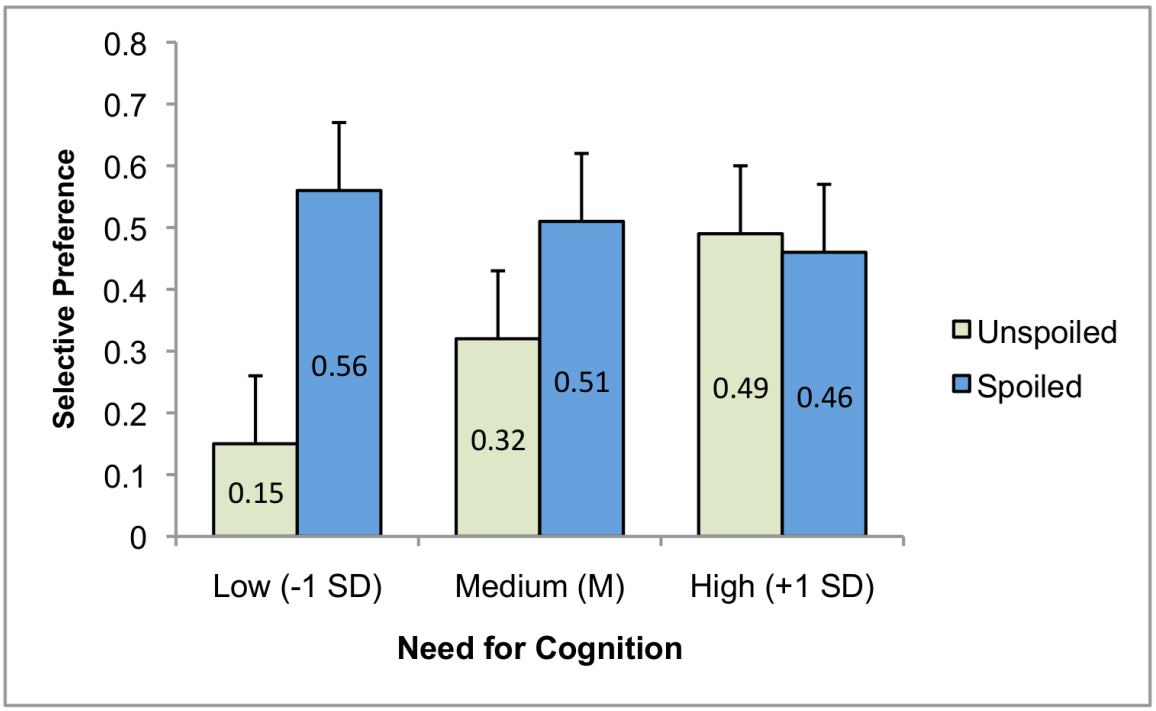

Figure 1. The moderating influence of need for cognition on selective preference for unspoiled versus spoiled stories.

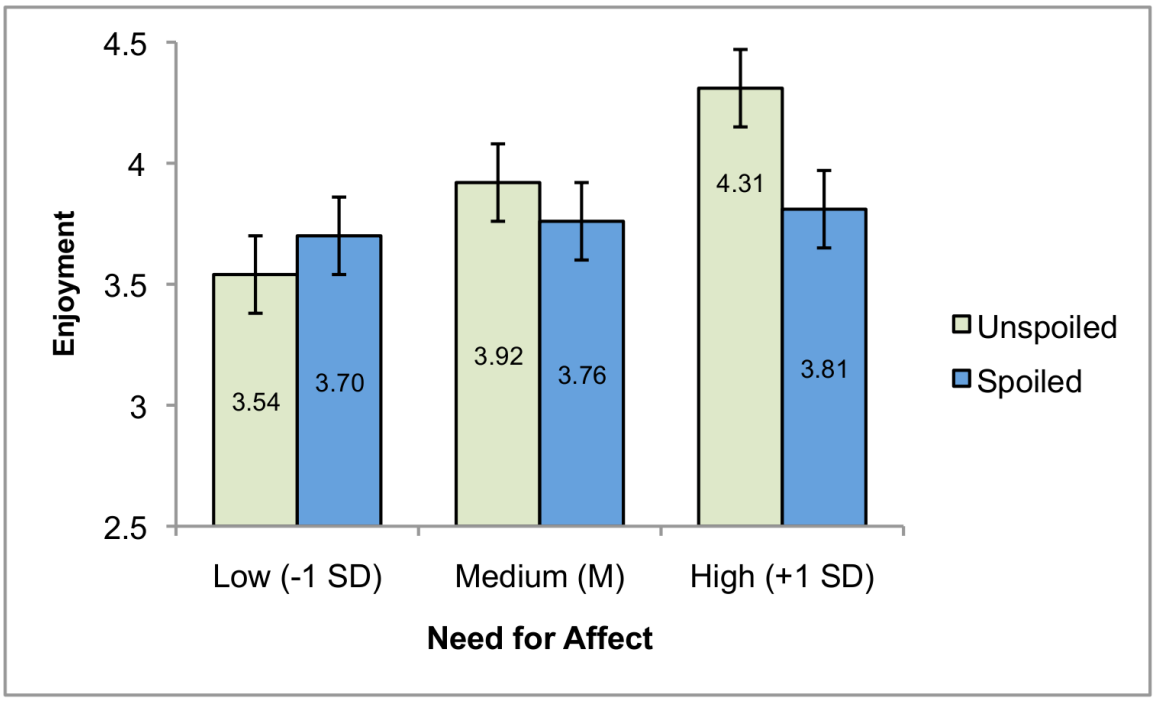

Figure 2. The moderating influence of need for affect on enjoyment of unspoiled versus spoiled stories.

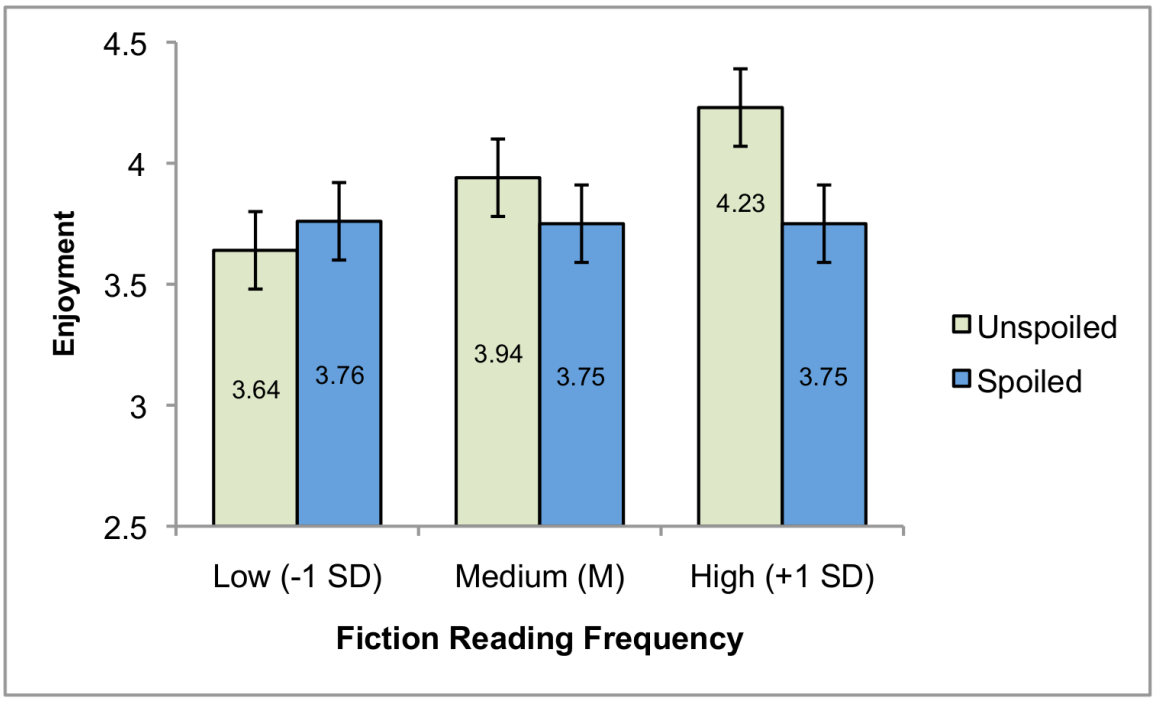

Figure 3. The moderating influence of fiction reading frequency on enjoyment of unspoiled versus spoiled stories.