The entertainment value of conspiracy theories: a replication and extension

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Abstract:

The current study aimed to replicate and extend the work of Van Prooijen, Ligthart, Rosema and Xu (2022). The aim was to test a hypothesized model where the entertainment value of a text describing an election event predicts conspiracy beliefs through entertainment appraisals and perceived emotional intensity. Additionally, it was hypothesized that the trait sensation seeking would amplify the effects of entertainment appraisals and perceived emotional intensity on conspiracy beliefs. As an extension, analytical thinking was hypothesized to form a buffer against entertainment appraisals and perceived emotional intensity. Participants were exposed to an analytical priming test with either analytically primed words or neutral control words, after which they read a text about an election event that was written in an either entertaining or a boring way. Findings showed that participants had stronger conspiracy beliefs after reading the entertaining text compared to the boring text, however, this effect was not mediated by entertainment appraisals and emotional intensity. Furthermore, being primed with analytical thinking was found to predict lower appraisals of entertainment and lower experienced emotional intensity, though not as a moderator. Finally, sensation seeking did not significantly interact with entertainment appraisals or perceived emotional intensity. It is concluded that entertaining narratives are more likely to elicit conspiracy beliefs than boring ones. Some practical recommendations are discussed that are based on these insights.

Introduction

Throughout history, conspiracy theories have circulated as intriguing narratives and explanations for many sorts of impactful societal events. During the recent Covid-19 pandemic, for example, an ongoing conspiracy theory was that vaccines for the Covid-19 virus carry microchips in an effort by Bill Gates to inject citizens and trace them (*Disinfo: Bill Gates and Other Globalists Use the Corona Pandemic to Implant Microchips in the Whole of Humanity*, 2020). Another example of a rather recent conspiracy theory is that Donald Trump is allegedly waging a secret battle against a global group of satanic elites responsible for a child-trafficking network (Roose, 2021). Over the course of the last few decades and especially in recent years, the interest and research dedicated to conspiracy beliefs has increased substantially (Pilch, Turska-Kawa, Wardawy, Olszanecka-Marmola & Smołkowska-Jędo, 2023). However, due to their convoluted and multi-faceted nature, conspiracy beliefs are still yet to be fully understood. Given the potential negative consequences of conspiracy beliefs on individuals and society as a whole, it continues to be necessary to uncover more about what makes these theories attractive and how conspiracy beliefs can be averted.

In their study, Van Prooijen and colleagues (2022) have found evidence that conspiracy theories generally contain entertainment value and bring out intense emotions, which is one of the reasons that they are perceived as attractive. In the current contribution, the work of Van Prooijen and colleagues (2022) is replicated and extended. It is argued that conspiracy theories contain a high degree of entertainment value and emotional intensity, which makes them compelling narratives. Moreover, individuals high in sensation seeking are argued to be especially attracted to the entertaining and emotionally intense nature of conspiracy theories.

However, an extension to the study of Van Prooijen and colleagues (2022) is the addition of the factor analytical thinking and a more in-depth exploration of processing fluency. It is argued that analytical thinking forms a buffer against entertainment appraisals and emotional intensity. With regard to processing fluency, the postulation is that the entertainment value of conspiracy theories makes them not only more attractive, but also more easy to process which leads to higher truth inferences. The research question of the current study is: Do perceptions of entertainment and emotional intensity within conspiracy theories lead to conspiracy beliefs?

Theoretical framework

Reasons for beliefs in conspiracy theories

In general, a conspiracy theory can be defined as the belief that a specific event involves a group of powerful individuals that secretly work together to achieve malevolent goals (van Prooijen & Douglas, 2018). In case individuals come to belief in conspiracy theories, there can be a variety of negative consequences such as decreased adherence to government regulations (Earnshaw et al., 2020), decreased trust in institutions and official narratives (Imhoff & Lamberty, 2020), a smaller likelihood to participate in healthy behaviors (Earnshaw et al., 2020) and an increased likelihood to participate in illegal forms of action (Imhoff & Lamberty, 2020).

There are various aspects as to why individuals may come to believe in conspiracy theories. One aspect is related to negative emotions. Threatening events may lead to negative emotions such as anxiety, fear and powerlessness, which happen to be one of the foundational reasons for belief in conspiracy theories (van Prooijen, 2018). A consequence of experiencing these negative emotions is that a sense of threat occurs and the need to comprehend one's social environment increases, thereby creating a suspicious mindset which might encourage individuals to believe in a conspiracy theory (van Prooijen, 2018). Besides negative emotions, emotion dysregulation is also linked with belief in conspiracy theories. Molenda and colleagues (2023) have found that conspiracy theories are more appealing to individuals who have problems processing emotions and threat-related stimuli. If individuals cannot cope with their emotions, then believing conspiracy theories can constitute an alternative way of coping by blaming evil influential groups.

Another aspect of belief in conspiracy theories pertains to the desire to fulfill psychological motivations. In the work of Douglas, Sutton and Cichocka (2017), three psychological motivations are mentioned, namely epistemic, existential and social motivations. Epistemic motivations involve the desire to acquire knowledge and meaning. Because conspiracy theories tend to connect events that are unrelated, individuals who may have an increased epistemic desire may especially be drawn to conspiracy theories as these theories can make an otherwise meaningless situation appear more meaningful (Brotherton & French, 2014). Furthermore, existential motivations involve desire for control, autonomy and security. Because conspiracy theories often target outgroups and label them as threatening, a consequence is that this can create a temporary sense of security by creating a designated threat, therefore appealing to individuals with a heightened existential desire (Douglas, Sutton & Cichocka, 2017). As for social motivations, because conspiracy theories commonly blame negative outcomes on outgroups, the conspiracy theory believer is allowed to keep a desirable image of the self as well as the ingroup and can condemn unfavorable outgroups when the ingroup identity is threatened (Cichocka et al., 2016).

Finally, there are several background characteristics that may predispose individuals to belief in conspiracy theories. For example, belief in conspiracy theories is linked to lower analytical thinking and lower education (Douglas, Sutton & Cichocka, 2017), a higher need for uniqueness (Imhoff & Lamberty, 2020), being member of a disadvantaged social group and having a lower income (Freeman et al., 2020). Moreover, several personality traits also appear to be linked to belief in conspiracy theories such as paranoia and schizotypy (Brotherton & French, 2014).

Factors that make conspiracy theories unique

With regard to the explanatory nature of conspiracy theories, there are several factors that distinguish them from other sorts of narratives or explanations. For example, conspiracy theories are generally speculative in nature because they infer the existence of certain events without clear mention of evidence, relying mostly on the assumption that these events are hidden (Douglas, Sutton & Cichocka, 2017). A consequence of this reliance on speculation and lack of evidence-based claims is that conspiracy theories are often resistant to falsification. In addition, whenever a conspiracy theory is criticized, it is relatively easy for the theory to claim that the critic is part of the conspiracy itself, thereby further reducing the susceptibility to falsification (Douglas, Sutton & Cichocka, 2017).

Furthermore, conspiracy theories tend to cater to intuition and thinking biases such as the conjunction fallacy and the representativeness heuristic by associating unrelated events with each other and linking explanations for events with proportionally large conspiracies. An example of the latter would be the conspiracy theory that the Covid-19 virus was intentionally created as a biological weapon to reduce the population (Miller, 2020). This theory may intuitively feel more proportional to the large scale and profound consequences of the pandemic, as opposed to the intuitively less proportional and more subtle explanation that the virus has resulted from zoonosis.

The entertainment value of conspiracy theories

It is evident from the characteristics discussed so far that conspiracy theories are unique explanations, distinguishing themselves from most other mainstream explanations and descriptions. However, one aspect that has not received a lot of attention in the literature entails the entertaining quality of conspiracy theories. Because conspiracy theories often contain narrative elements such as mystery, sensation, perceived threat, and conflicts of good and evil, conspiracy theories possess entertainment value (Van Prooijen, Ligthart, Rosema & Xu, 2022).

In a set of studies, Van Prooijen and colleagues (2022) hypothesized that conspiracy theories are entertaining narratives that elicit entertainment appraisals and intense emotions, and that this altogether facilitates belief in conspiracy theories. In one of these studies, participants were given a text that described an election event in an either entertaining and emotionally intense way, or in a more boring way that was less entertaining and emotionally intense. Importantly, the texts contained the same narrative structure and an equal number of words. It was found that the participants that had read the entertaining text endorsed stronger conspiracy beliefs than the participants that had read the boring text. In addition, the authors found an association between both entertainment appraisals and emotional intensity with conspiracy beliefs which was only present for those high in the personality trait sensation seeking. Overall, the conclusion of the study provided evidence for the entertainment value of conspiracy theories.

Indeed, many conspiracy theories are similar to narratives in that they tell fictional stories or form alternative realities and constitute creative productions that are attentiongrabbing and spectacular (Bonetto & Arciszewski, 2021). In addition, conspiracy theories often involve a secretive conflict between parties of good and evil and create mystery with regard to the ambiguous role of powerful elite groups and organizations (van Prooijen, 2022). Conspiracy theories also form alternative explanations that are deviations from more common official or mainstream explanations of events, and therefore conspiracy theories in general appear more intriguing and new (van Prooijen, 2022). Adornetti (2023, p. 2) states that: ''like argumentation, narrative is a powerful tool of persuasion as it activates some mechanisms that turn out to be particularly effective to modify or change people's beliefs and attitudes''. Moreover, certain studies have found that narratives are more persuasive than non-narratives and that the more an individual become immersed in a narrative, the more likely it is that the beliefs promoted within that narrative will be adopted (Adornetti, 2023). An example of a conspiracy theory that involves many characteristics similar to an entertaining narrative is the previously mentioned QAnon theory, which is a conspiracy theory that claims that Donald Trump is waging a secret conflict against a group of satanic elites who control a child-trafficking network. At face value, this conspiracy theory involves a conflict between two designated parties, one of which is evil and the other of which is good, it also involves an alternative reality in which a dangerous secret conflict is waging, it ascribes a dubious role to groups in power, and it is attention-grabbing and spectacular. In line with this example, many if not most conspiracy theories contain entertainment value that is enhanced relative to more common official or scientific narratives and explanations of events.

Emotional intensity and sensation seeking

Additionally, another factor that conspiracy theories arguably elicit other than entertainment value is emotional intensity. It is apparent that conspiracy theories ascribe threatening roles to powerful groups and revolve around secretive actions that are assumed to be malevolent. Meuer et al. (2023) argue that these factors of threat and secrecy have a high capacity to be emotionally loaded and can cause strong emotional reactions of anger and fear in those that view the conspiracy theory. Furthermore, after having compared the language and content of 36 pairs of conspiratorial- and non-conspiratorial articles, Meuer et al. (2023) have found that the conspiratorial articles were rated to contain more emotional but also more negative information.

One may wonder how this negative and emotionally intense aspect of conspiracy theories does not deter individuals from engaging with them. However, it is noteworthy that exposure to negative experiences may not necessarily be aversive. As mentioned by Van Prooijen and colleagues (2022), in the same sense that listening to sad music or watching a scary movie can yield a pleasurable and intense emotional experience, involving oneself with a conspiracy theory may also be an entertaining and emotionally intense experience for some, even if negative emotions are evoked. Moreover, research suggests that both positive and negative emotions increase belief in conspiracy theories, and events that are more as opposed to less emotionally involving increase belief in conspiracy theories as well (Van Prooijen, Ligthart, Rosema & Xu, 2022). For these reasons, it is argued that conspiracy theories not only possess entertainment value, but that they also tend to evoke intense emotions, and it is argued that it is the intensity of emotions that appears to be the engaging factor, as opposed to the valence of emotions (i.e. positive or negative).

Furthermore, the entertaining and emotionally intense nature of conspiracy theories could arguably appear more attractive to some individuals than others. An individual trait that is related to intense experiences and that may predispose individuals to be more motivated to believe in conspiracy theories is sensation seeking. The trait sensation seeking can be defined as "a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (Zuckerman, 1994, p. 27).

Although believing in conspiracy theories is accompanied with many negative and risky consequences, individuals high in sensation seeking may still come to adopt certain conspiracy theories in order to obtain intense and novel experiences. The entertainment value and emotional intensity of conspiracy theories could especially attract such individuals, as learning about and involving oneself in a conspiracy theory can become an emotionally intense and sensational experience that is rewarding. Indeed, individuals who come to believe a specific conspiracy theory may even take on the role of an investigator who has obtained an opportunity to discover a secret and spectacular narrative (van Prooijen, 2022). Taken together, it is argued that the trait sensation seeking amplifies the effects of entertainment appraisals and emotional intensity as individuals who are motivated to seek sensation should be more likely to endorse conspiracy theories due to the entertaining and emotional characteristics.

Processing fluency and analytical thinking

As argued thus far, many of the characteristics of conspiracy theories make them appear more entertaining and allow them to evoke more intense emotions compared to relatively mundane and official narratives. However, there is another consequence tied to this sensational nature which potentially reinforces the persuasiveness of conspiracy theories. The engaging and captivating nature of conspiracy theories allows individuals to more easily process and understand them, and as a result, to be more inclined to infer that these theories are truthful (Hertwig, Herzog, Schooler, & Reimer, 2008; Van Prooijen, Ligthart, Rosema & Xu, 2022). The process through which this persuasion happens is called processing fluency. Processing fluency is a heuristic which implies that an object processed more quickly and easily will have a higher criterion value compared to other objects (Pohl, Erdfelder, Michalkiewicz, Castela & Hilbig, 2016). In other words, processing fluency involves ''subjective feelings of ease or difficulty that occur while processing new information'' (Bullock, Shulman, & Huskey, 2021, p. 3).

When an individual processes information fluently, positive associations such as feelings of knowing and confidence are triggered and attributed to the information itself, thereby achieving more persuasive outcomes (Bullock, Shulman, & Huskey, 2021). A conspiracy theory that is entertaining, attention-grabbing and more easy to process may therefore be appraised as more truthful than an alternative theory or narrative that is mundane, uninteresting, and therefore more difficult to process. It is therefore argued that the entertaining value of conspiracy theories makes them more easy to process, which should lead to a higher chance of individuals endorsing the conspiracy theories.

Finally, one aspect that was not included in the study of Van Prooijen and colleagues (2022) entails analytical thinking. One could argue that individuals should be able to safeguard themselves against the sensational nature of conspiracy theories by focusing not on the superficial nature of a text, but rather on the content. Dual process theory postulates that System-1 of information processing is fast, automatic and associative, while System-2 is deliberate, slow and analytical (Osman, 2004). The implication here is that such analytical thinking, characterized by the intentional and careful processing of information, should lead to a focus on facts, logic and rationality, rather than superficial elements such as entertainment value and perceived emotional intensity. Along the same lines, the opposite case of lower analytical thinking would involve lower effort automatic processing of information which would likely lead to an increased appraisal of superficial aspects such as entertainment value and emotional intensity as opposed to facts and logic.

In this way, higher analytical thinking should attenuate entertainment appraisals and emotional intensity within conspiracy theories by leading to a stronger focus on facts and logic. The inclusion of analytical thinking in the current study forms an extension to the study of Van Prooijen and colleagues (2022).

To summarize, it is inferred that conspiracy theories constitute entertaining narratives that generally evoke a high degree of entertainment appraisals and intense emotional experiences, thereby turning involvement with conspiracy theories into engaging, captivating experiences. In addition, individuals high in sensation seeking should especially be attracted to conspiracy theories as the entertaining and emotionally intense nature of these theories becomes even more rewarding. Furthermore, it is argued that the entertaining and emotionally intense qualities of conspiracy theories allows them to be more easily processed, resulting in a higher likelihood that the theories are endorsed and believed to be true. However, higher analytical thinking should counterbalance these processes by resulting in a stronger focus on facts and logic as opposed to entertainment and emotional intensity, thereby safeguarding individuals against superficial and emotional information processing.

The current study

The current contribution builds on the work of Van Prooijen, Ligthart, Rosema and Xu (2022), and consists of a replication and extension. The main goal was to investigate whether higher entertainment value leads to an increase in conspiracy beliefs through entertainment appraisals and experienced emotional intensity. An extension and additional goal was to investigate if analytical thinking forms a buffer against entertainment appraisals and the perception of emotional intensity that results from high entertainment value. Finally, another aim was to investigate if sensation seeking amplifies the effects of entertainment appraisals and perceived emotional intensity on conspiracy beliefs.

There was a total of three independent variables. The first independent variable was a manipulation of text that contained entertaining and emotionally intense wording as opposed to less entertaining and emotionally intense wording. Although theoretically, entertainment value and emotional intensity are denoted in this study as two separate variables, it would be difficult to separate these two variables in a manipulation. Therefore, the manipulation of entertainment value and emotional intensity consisted of one single combined manipulation, as was done in the work of Van Prooijen, Ligthart, Rosema and Xu (2022). The second independent variable was a manipulation of analytical thinking which was expected to be a moderator for entertainment appraisals and perceived emotional intensity. The third independent variable was sensation seeking, which was not manipulated but instead measured as a moderator for the effects of entertainment appraisals and emotional intensity on conspiracy beliefs. The final variable of interest was processing fluency, which was not manipulated but instead measured on an exploratory note. The dependent variable was conspiracy beliefs. The hypothesized theoretical framework with associated variables can be found in Figure 1. Altogether, the established theoretical assumptions led to the following hypotheses:

H1: Reading a text high in entertainment value will elicit stronger conspiracy beliefs than reading a text low in entertainment value.

H2: The link between entertainment value and entertainment appraisals as well as perceived emotional intensity will be less pronounced among participants that are analytically primed than those that are not.

H3: The link between entertainment appraisals and conspiracy beliefs as well as the link between perceived emotional intensity and conspiracy beliefs will be more pronounced among participants that are high in sensation seeking than those low in sensation seeking.

Analytical Thinking Moderator (-) Entertainment appraisals Entertainment Value Conspiracy beliefs Emotional intensity



Method

Design

A 2 (Entertainment Value: high vs. low) by 2 (Analytical Thinking: yes vs. no) factorial design was used. However, as mentioned, sensation seeking and processing fluency were also measured but not manipulated. Participants were randomly assigned to one of four possible conditions: an entertaining vs. boring text condition, and an analytical vs. neutral condition. See Table 1 for N values depicted for each condition.

Table 1. W values for all jour conditions.						
	AT high	AT Low	Total			
Ent value high	33	32	65			
Ent value low	28	29	57			
Total	61	61	122			

Table 1. N values for all four conditions

Note. Ent = entertainment, AT = analytical thinking.

Participants

A total of 140 Dutch participants have filled in the online survey. Out of the 140 participants, 18 participants have been left out of the dataset because they had either not finished the survey, or because they had not filled it in seriously. The final sample consisted of 122 participants (89 women, 28 men, 5 preferred not to state; $M_{age} = 21.02$, SD = 2.97).

Procedure

Participants started by performing a short priming task with the aim to unobtrusively stimulate analytical thinking. The priming task was a version of the scrambled-sentence verbal fluency task which was adjusted for the current context (Swami, Voracek, Stieger, Tran & Furnham, 2014). All of the participants received 10 sets of 5 words that were presented in random order, and each set of words contained a word that should be left out in order to assemble a complete sentence. However, in the analytical thinking condition, 5 out of the 10 word sets contained a target prime word that was related to analytical thinking (e.g., *rational, analyze*), whereas the control condition only contained neutral words.

After the priming task, participants read the same fictional text used by Van Prooijen and colleagues (2022) about an election in a country called Contoria. Participants were hereby asked to try and vividly imagine the situation and put themselves in the perspective of a citizen of Contoria. Participants received either an entertaining or boring text, both of which were identical to the texts used by Van Prooijen and colleagues (2022). Both of these texts also contained an equal number of words and consisted of the same type of narrative structure. The manipulation of the texts involved a change in wording that resulted in a rather informal, emotionally intense, and sensational description of the election in the entertaining condition (e.g., ''In debates both candidates passionately argued for their ideas but can't seem to agree on anything, and regularly they appear to be genuinely angry at each other."). In the boring condition, however, the description of the election was written in a more formal and detached manor (e.g., " In debates both candidates exchanged their ideas of what legislation and law-making institutions are in need of refinement, and made it apparent that they have different viewpoints on these issues.").

After participants had finished reading the text, they answered the single-item Moses Illusion task as well as the Cognitive Reflection Test-2 as a manipulation check for analytical thinking. The Moses Illusion task is a single-item question which can reveal whether or not a participant has engaged in analytical thinking and has spotted the illusion, or if the participant has engaged in superficial information processing ('How many of each kind of animal did Moses take on the Ark?''). In the latter case, a participant will likely give the answer 'two' even though it was obviously Noah, and not Moses who was the biblical figure with the Ark.

After this manipulation check, a short single-item processing fluency scale was included in addition to the scales that were used by Van Prooijen and colleagues (2022). Participants were then asked to indicate how entertaining they found the text to be.

Further, participants were asked to indicate to what degree the emotions that they felt while reading the article were negative or positive and what the intensity of their emotions was. Then, participants' belief in a conspiracy with regard to the fictional election was measured. Participants were asked to indicate how likely they thought it was for specific conspiracy-related events to happen. After the conspiracy belief measure, sensation seeking was measured. Finally, participants were asked if they had participated seriously in the survey as well as a few demographic questions. The complete list of measures can be found in Appendix A through E.

Measurements

Because this study was a replication and extension, most of the measures used are derived from the study of Van Prooijen and colleagues (2022). The measures that form an addition are analytical thinking which consists of the Cognitive Reflection Test-2 (Thomson & Oppenheimer, 2016) combined with the Moses Illusion task (Erickson & Mattson, 1981), and the other additional measure was the single-item processing fluency scale (Graf, Mayer & Landwehr, 2018). Analytical thinking. Five items measured analytical thinking as a manipulation check, all of which were coded as wrong (1) or right (2). Four of these items jointly formed the Cognitive Reflection Test-2 (e.g. "If you're running a race and you pass the person in second place, what place are you in?") ($\alpha = .46$). One item was the Moses illusion task ("How many of each kind of animal did Moses take on the Ark?").

Processing fluency. One Likert-item (ranging from 1 = very easy, 5 = very hard) measured how easy or difficult the text about the election event was to read ("Please indicate how easy or difficult you found the text about Contoria to read"). It was decided to use this single-item Likert scale because there are findings that suggest it can validly and consistently measure fluency experiences just as well as a multi-item scale (Graf, Mayer & Landwehr, 2018).

Entertainment appraisals. A Likert-scale (ranging from 1 = not at all, 5 = very much) consisting of twelve items measured entertainment appraisals experienced while reading the election event texts (e.g. "To what extent was the text about Contoria that you read exciting?") ($\alpha = .65$). Although a Cronbach's Alpha of .65 is not ideal, it was decided to use the complete scale with all items in order to accurately replicate the study of Van Prooijen and colleagues (2022). Additionally, a Cronbach's Alpha of 0.6 is often considered to be an acceptable level of reliability (Ursachi, Horodnic & Zait, 2015).

Emotional valence. One Likert-item (ranging from 1 = very negative, 5 = very positive) measured emotional valence experienced while reading the election event texts (''How positive or negative were the emotions that you felt while reading the text?'').

Emotional intensity. One Likert-item (ranging from 1 = not at all intense, 5 = extremely intense) measured emotional intensity experienced while reading the election event texts (''How intense were the emotions that you felt while reading the text?'').

Conspiracy beliefs. A Likert-scale (ranging from 1 = very unlikely, 5 = very likely) consisting of seven statements measured conspiracy beliefs regarding the election event described in the texts (e.g. "Secret organizations in Contoria strongly influence the election outcome" and "Opinion polls have been secretly manipulated") ($\alpha = .88$).

Sensation seeking. A Likert-scale (ranging from 1 = strongly disagree, 5 = strongly agree) consisting of eight statements measured the personality trait sensation seeking (e.g. ''I

like to do frightening things'' and ''I get restless when I spend too much time at home'') ($\alpha = .82$).

Results

Manipulation checks

In order to check if the manipulations worked, one-way ANOVAs were used. Participants perceived the entertaining text as more entertaining (M = 2.63, SD = 0.45) than the boring text (M = 2.38, SD = 0.46), F(1, 120) = 9.20, p = .003; $\omega^2 = .06$. Participants also experienced more intense emotions after reading the entertaining text (M = 2.52, SD = 1.02), than after reading the boring text (M = 2.05, SD = 0.95), F(1, 120) = 6.89, p = .010; $\omega^2 = .05$. Analytical thinking scores of the CRT-2 and Moses illusion task were altogether not significantly different between the analytically primed and control groups, F(1, 119) = 1.57, p = .21; $\omega^2 = .01$.

Hypothesized model

As a means to test the hypothesized model, the first step was to test whether the entertainment value of a text has an effect on entertainment appraisals and emotional intensity, and whether analytical thinking is a moderator for this effect. A two-way MANOVA was employed with Entertainment Value (high vs. low) and Analytical Thinking (yes or no) as IVs, and entertainment appraisals, emotional intensity and conspiracy beliefs as DVs. Because emotional valence was not significantly associated with any variable other than processing fluency (which was not included in the theoretical model), it was decided to not include emotional valence in the analyses. The full Pearson correlation matrix can be found in Table 2.

Multivariate results

Multivariate results of the two-way MANOVA revealed a main effect of Entertainment Value (Wilks' Lambda = .87, F(1, 122) = 5.87, p < .001; $\eta_p^2 = .13$), and a main effect of Analytical Thinking (Wilks' Lambda = .93, F(1, 122) = 2.92, p = .037; $\eta_p^2 = .07$), but no significant interaction effect (F(1, 122) = .69, p = .559; $\eta_p^2 = .02$). This means that the effect of Entertainment Value on entertainment appraisals and emotional intensity was not attenuated by Analytical Thinking, therefore, hypothesis 2 is rejected.

Univariate results

More specifically, univariate ANOVA results show that participants reported more entertainment when reading the entertaining text in comparison to the boring text (M = 2.63, SD = 0.45, versus M = 2.38, SD = 0.46; F(1, 122) = 9.59, p = .002; $\eta_p^2 = .08$). Participants also experienced more intense emotions when reading the entertaining text in comparison to the boring text (M = 2.52, SD = 1.02, versus M = 2.05, SD = 0.95; F(1, 122) = 7.55, p = .007; $\eta_p^2 = .06$). Thirdly, participants reported a higher degree of conspiracy beliefs with regard to the election event described in the entertaining text compared to the boring text (M = 2.97, SD = 0.81, versus M = 2.56, SD = 0.95; F(1, 122) = 6.55, p = .012; $\eta_p^2 = .05$). This means that a higher entertainment value of the text significantly predicted higher conspiracy beliefs, therefore hypothesis 1 is confirmed.

Furthermore, participants that were analytically primed perceived less entertainment when reading the text than participants that were not analytically primed (M = 2.43, SD = 0.46, versus M = 2.60, SD = 0.47; F(1, 122) = 4.26, p = .041; $\eta_p^2 = .04$). Additionally, participants that were analytically primed experienced less intense emotions when reading the text than participants that were not analytically primed (M = 2.07, SD = 0.95, versus M = 2.54, SD = 1.03; F(1, 122) = 7.25, p = .008; $\eta_p^2 = .06$). Finally, participants' reports of conspiracy beliefs did not significantly differ between the priming and control treatment, F(1, 122) = 0.08, p = .773; $\eta_p^2 = .00$).

Mediation analysis

In a second step to test the model, the variables were entered in a multiple mediation analysis using the PROCESS macro by Hayes (Hayes, 2013). Model 14 was used with Entertainment Value entered as the independent variable, conspiracy beliefs as the dependent variable, entertainment appraisals and emotional intensity as mediators, sensation seeking as moderator variable W, and Analytical Thinking as a covariate. One reason that Analytical Thinking was entered as a covariate is that the model does not allow this variable to be optimally positioned as an additional moderator in accordance with the hypothesized model. Another reason is that Analytical Thinking was already tested as moderator in the MANOVA analysis. The full mediation model can be found in figure 2.

As in the MANOVA analysis, the main effect of Entertainment Value on conspiracy beliefs was significant (B = -.34, CI_{95%}[-.68; -.002]), as was the effect on entertainment appraisals (B = -.25, CI_{95%}[-.42; -.09]) and on emotional intensity (B = -.48, CI_{95%}[-.82; -.13]). Also in line with the MANOVA analysis was a significant effect of Analytical Thinking on entertainment appraisals (B = .17, CI_{95%}[.01; .33]) and on emotional intensity (B = .48, CI_{95%}[.14; .83]).

Unexpectedly, however, there were no significant effects on conspiracy beliefs of either entertainment appraisals (B = -.05, CI_{95%}[-.43; .33]) or emotional intensity (B = .15, CI_{95%}[-.03; .33]). There was also no significant interaction between entertainment appraisals and sensation seeking (B = -.11, CI_{95%}[-.51; .21]) nor between emotional intensity and sensation seeking (B = .03, CI_{95%}[-.16; .22]).

These findings indicate that although Entertainment Value does seem to predict conspiracy beliefs, this effect is not mediated by entertainment appraisals or emotional intensity, nor does sensation seeking function as a moderator for either of these two variables. Therefore, hypothesis 3 is rejected.

Explorative analysis

Finally, to analyze the role of processing fluency, the variable has been entered in a Pearson correlation analysis amongst all other variables, which can be found in table 1. Results show that processing fluency is significantly associated with Entertainment Value, entertainment appraisals, Analytical Thinking and emotional valence.

Additionally, to analyze whether or not processing fluency mediates an effect of entertainment appraisals on conspiracy beliefs, these three variables have been entered in model 4 using the PROCESS macro by Hayes. There was no significant indirect effect of entertainment appraisals on conspiracy beliefs through processing fluency (B = .02, CI_{95%}[-.07; .12]).

Discussion

The present study has shown that participants that read an entertaining text about an election event developed stronger conspiracy beliefs than participants that read a boring text about an election event. However, this effect was not mediated by entertainment appraisals and perceived emotional intensity. In addition, being primed with analytical thinking predicted lower appraisals of entertainment and lower experienced emotional intensity, although not as a moderator. Finally, sensation seeking did not significantly interact with entertainment appraisals or perceived emotional intensity.

First of all, the results provide evidence that entertaining narratives are more likely to elicit conspiracy beliefs than boring ones. Participants that read a text about an election event, which was written in an entertaining and emotionally intense way, reported higher beliefs of a conspiracy than participants that read a text describing the same event with a similar structure, but written in a more boring and formal way. This result replicates that of Van Prooijen, Ligthart, Rosema and Xu (2022). The implication of this finding is that conspiracy theories not only tend to be entertaining narratives as demonstrated by Van Prooijen, Ligthart, Rosema and Xu (2022), as well as Bonetto and Arciszewski (2021), but that entertaining narratives are also more likely to elicit conspiracy beliefs.

In line with these findings, a practical recommendation is that the manipulation of the entertaining and sensational qualities of narratives and descriptions should be carried out with care, as doing so may increase the perception of conspiracy elements within these narratives. As a means to limit conspiracy beliefs, it may be wise to give priority to a more formal and modest style of communication and narration of news and events over a sensational and intense style. However, because creating sensational, entertaining and negative news helps news outlets to attract mass audiences, it may be difficult to give priority to these factors (Uzuegbunam & Udeze, 2013). It is therefore logical to encourage and empower citizens to be pro-active and to safeguard themselves against both conspiracy theories and entertaining texts that could elicit conspiracy beliefs. As an example, individuals should be able to identify conspiracy theories by questioning factors such as the reputation and reliability of the author, whether or not the item relies on fact-based arguments, et cetera (European Commission, 2024).

Moreover, the act of safeguarding oneself against conspiracy theories and entertaining narratives is particularly necessary as research has shown that timely inoculation before exposure to conspiracy theories forms an effective way of reducing conspiracy beliefs (Earnshaw et al., 2020). It would therefore be beneficial to refute entertaining conspiracy theories before exposure and to inform citizens beforehand about ways in which conspiracy theories can be sensational and engaging.

Analytical thinking

Furthermore, although being primed with analytical thinking did not form a buffer against the entertainment value of a text as a moderator, it did predict lower entertainment appraisals and lower emotional intensity as a main effect. This result shows that analytical thinking reduces entertainment appraisals and perceived emotional intensity of a given text, even if not by moderating the entertainment value of a text. As previously mentioned, analytical thinking is consistently found to be associated with lower conspiracy beliefs (Douglas, Sutton & Cichocka, 2017; Freeman et al., 2020; van Prooijen & Douglas, 2018). Adding to this established association, it is argued with the current contribution that decreasing entertainment appraisals and emotional intensity by increasing analytical thinking could help shift focus to facts, logic and rationality when reading descriptions or narratives of events. However, because the effect of analytical thinking in this study has only been measured on entertainment appraisals and emotional intensity, which on their own turn did not predict conspiracy beliefs, more experimental research is necessary to establish this link and to find out how these processes exactly work.

Processing fluency

Next, a correlation analysis has found that processing fluency was significantly associated with entertainment value, entertainment appraisals and emotional valence. As expected, these results suggests that the entertaining text was reportedly easier to process than the boring text. It is arguable that the more entertaining text was easier to read because it was more interesting, therefore making it easier for the reader to stay engaged with the text and to read it while simultaneously exerting less effort. The significant association between not only processing fluency and entertainment value, but also between processing fluency and entertainment appraisals suggests that the more entertaining perception of the text was associated with easier reading, therefore enforcing this line of reasoning. Finally, the association between processing fluency and emotional valence suggests that experiencing negative emotions while reading the text made it more difficult to read. It could be that the negative emotions that participants experienced made it harder for them to adhere to reading the text, thereby making it more difficult to read.

Taken together, although these are correlational results which cannot lead to inferences of causation, they do point to a direction that is line with the idea that an entertaining narrative is more easy to read. It is therefore argued that a conspiracy theory, because of its entertaining qualities, would be processed more fluently and would therefore be more likely to be perceived as true. However, because no particular conspiracy theory was mentioned or used in the text manipulations, it would be interesting for future research to investigate what the influence of processing fluency is with regard to the truthfulness of a concrete conspiracy theory as opposed to a text that may or may not be appraised as revolving around a conspiracy.

Mediation analysis

Furthermore, against expectations, entertainment appraisals and emotional intensity did not mediate the effect of entertainment value on conspiracy beliefs, nor was there any interaction with sensation seeking. This means that even though the entertainment value of a text did predict conspiracy beliefs, it was mediated by variables other than entertainment appraisals and emotional intensity. This is not entirely surprising given the relatively abstract and wide implications of entertainment value, meaning that entertainment value possibly encompasses a multitude of variables other than entertainment appraisals and emotional intensity. Additionally, it is difficult to purely manipulate a text to only differentiate in entertainment value without unintentionally manipulating other variables.

Another study published at the time of writing has also replicated the study of van Prooijen and colleagues (2022) and has found that the entertainment value of a text predicts conspiracy beliefs not through entertainment appraisals, but through perceptions of evil intentions (E. Harmon-Jones, Szymaniak, Edgeworth, Sebban, & C. Harmon-Jones, 2024). More specifically, it was found that texts higher in entertainment value were perceived as having conspirators with more evil intentions than texts lower in entertainment value. At the same time, the authors found that although higher entertainment value did lead to an increase in entertainment appraisals, these appraisals did not mediate the effect of entertainment value on conspiracy beliefs whereas perceived evil intentions did. It may be that the inclusion of the variable evil intensions would have mediated the effect of entertainment value on conspiracy beliefs in the current study. Taken together, it is evident that more experimental research is necessary to establish the exact constructs that mediate the effect of entertainment value of narratives on conspiracy beliefs.

Strengths and limitations.

There are a few strengths and weaknesses present in the current research. First of all, many of the studies revolving around conspiracy beliefs are correlational in nature, and experimental studies dedicated to conspiracy beliefs are limited (Pilch, Turska-Kawa, Wardawy, Olszanecka-Marmola & Smołkowska-Jędo, 2023). The experimental design of this study therefore somewhat increases the practicality and usefulness of the current contribution. It also appears that there are very few studies that research the influence of entertainment value of narratives on conspiracy beliefs, which furthermore adds to the value of this contribution. Additionally, there was only a single reference to the word conspiracy in the final item of the conspiracies or references made to any conspiracy theory in the texts that the participants read, nor in the measurements that were conducted. This has arguably helped to reduce any response biases that the participants may have had when answering the questions.

One limitation is that the manipulation check of analytical thinking did not show significant differences in scores of analytical thinking. This was possibly a result of the time that has passed between the priming of analytical thinking and the manipulation check, as participants were given the election text and had to answer a few questions before the analytical thinking check was given. Finally, as mentioned before, it is very difficult to manipulate the entertainment value of text without also inadvertently manipulating other factors, therefore it is possible that the observed results are due to factors not measured. More experimental research is needed to investigate the influence of entertainment value of narratives with regard to conspiracy beliefs and to establish which variables mediate this relationship.

Conclusion

The present research has found evidence which suggests that entertaining narratives are more likely to elicit conspiracy beliefs than boring narratives. This is an addition to the relatively small existing base of literature which posits that conspiracy theories inherently hold entertainment value and are therefore attractive narratives. The main implication of this finding is that well-willing sources should pay attention to the amount of sensationalism applied to their narratives in order to limit conspiracy beliefs. Additionally, individuals should be encouraged and empowered to safeguard themselves against conspiracy theories, and efforts should be made to inoculate individuals against conspiracy theories and entertaining narratives before they are exposed.

Although conspiracy theories traditionally may have been viewed as relatively negative and distressing sources of information, the current contribution reinforces the idea that conspiracy theories can also be very entertaining and engaging in nature, making them attractive alternatives to mainstream sources of information. Given the consequences of conspiracy beliefs on both individual and societal levels, it is crucial that this aspect of conspiracy theories becomes well understood and is dealt with through effective interventions.

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 Table 2. Correlations between all variables.

	Ent. value	Priming condition	Analytical thinking	Ent. appraisals	Em. intensity	Em. valence	Sensation seeking	Processing	Conspiracy belief
Ent. value	-	.016	081	267**	233**	.070	018	.299**	229*
Priming condition	.016	-	114	.175	.236**	.012	.106	.047	.021
Analytical thinking	081	114	-	.120	.019	.078	.093	282**	.078
Ent. appraisals	267**	.175	.120	-	.383**	.060	.069	235**	.099
Em. intensity	233**	.236**	.019	.383**	-	099	055	154	.195*
Em. valence	.070	.012	.078	.060	099	-	.145	211*	062
Sensation seeking	018	.106	.093	.069	055	.145	-	086	.100
Processing fluency	.299**	.047	282**	235**	154	211*	086	-	058
Conspiracy belief	229*	.021	.078	.099	.195*	062	.100	058	-

Note. ** *p* < 0.01; * *p* < 0.05

Ent. = entertainment, Em. = emotional

Figure 2. Mediation model.



Note. Values shown are lower limit confidence interval, B, upper limit confidence interval. * p < .05; ** p < .01.

Appendix A

Election text entertaining condition.

Imagine that you live in the country of Contoria. The country has a good social welfare system and the state economy develops rapidly. Contoria also has its fair share of problems, however: There is an uneven distribution of healthcare and educational resources across regions, and particularly in the cities, outdoor air pollution is a problem. In this country, there is a presidential election between two candidates. The two candidates disagree completely about many issues that are important for the future of Contoria, and they are extremely close to one another in the polls. In debates both candidates passionately argued for their ideas but can't seem to agree on anything, and regularly they appear to be genuinely angry at each other. Contorian society is deeply divided between these two candidates, and emotions between citizens are rising high. Quite regularly protests take place, and everyone can feel the tension as two opposing camps are emerging in society. After months of bitter campaigning and conflict, the result of the election is still too close to call and a winner is far from decided. Everyone holds their breath up until the very last minute, as it is extremely unpredictable and exciting who will win.

Election text boring condition.

Imagine that you live in the country of Contoria. The country has a good social welfare system and the state economy develops rapidly. Contoria also has its fair share of problems, however: There is an uneven distribution of healthcare and educational resources across regions, and particularly in the cities, outdoor air pollution is a problem. In this country, there is a presidential election between two candidates. The two candidates have different positions about effective governance, and seem to have a comparable basis of electoral support. In debates both candidates exchanged their ideas of what legislation and law-making institutions are in need of refinement, and made it apparent that they have different viewpoints on these issues. Contorian society faces a difficult choice between these two candidates, and citizens often discuss their different points of view of what governmental reform is necessary. Quite regularly groups of citizens publicly articulate their opinions, and everyone tries to resolve the question which candidate proposes the best policies to address societal challenges. After months of campaigning, based on opinion polls it is difficult to ascertain what the outcome of the electoral process will be. Soon it will become known which candidate's policy program will be implemented.

Appendix **B**

Cognitive Reflection Test 2 (items 1 – 4) and Moses Illusion Task (item 5).

- 1. If you're running a race and you pass the person in second place, what place are you in?
- 2. A farmer had 15 sheep and all but 8 died. How many are left?
- 3. Emily's father has three daughters. The first two are named April and May. What is the third daughter's name?
- 4. How many cubic feet of dirt are there in a hole that is 3' deep x 3' wide x 3' long?
- 5. How many of each kind of animal did Moses take on the Ark?

Appendix C

Entertainment appraisals measure.

To what extent was the Internet article you just read.....

	1 = Not at all(1)	2 (2)	3 (3)	4 (4)	5 = Very much (5)
Interesting (1)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Entertaining (2)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Important (3)	0	\bigcirc	\bigcirc	0	\bigcirc
Engaging (4)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Boring (5)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Mysterious (6)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Adventurous (7)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Dull (8)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Captivating (9)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Exciting (10)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Attention- grabbing (11)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Frightening (12)	0	\bigcirc	\bigcirc	\bigcirc	0

Appendix D

Conspiracy belief measure.

While answering the following questions, please continue imagining that you are a citizen of Contoria.

Please indicate how likely or unlikely you consider it that the following issues occur: (1 = very unlikely, 5 = very likely)

	1 = very unlikely (1)	2 (2)	3 (3)	4 (4)	5 = very likely (5)
There will be cheating in the results counting process (1)	0	0	0	0	0
Election officers are bribed to favor one of the candidates (2)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Secret organizations in Contoria strongly influence the election outcome (3)	0	0	0	\bigcirc	\bigcirc
Opinion polls have been secretly manipulated (4)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
The winner has already been decided in secret before the election (5)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
There are "shadowy forces" behind the elections (6)	0	\bigcirc	0	\bigcirc	0
A conspiracy will determine the election outcome (7)	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

Appendix E

Sensation seeking measure.

You will now be asked a few questions about your preferences in life.

Please indicate to what extent you agree with the following statements: (1 = strongly disagree, 5 = strongly agree)

	1 = strongly disagree (1)	2 (2)	3 (3)	4 (4)	5 = strongly agree (5)
I would like to explore strange places (1)	0	\bigcirc	0	\bigcirc	0
I get restless when I spend too much time at home (2)	\bigcirc	\bigcirc	\bigcirc	0	\bigcirc
I like to do frightening things (3)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
I like wild parties (4)	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
I would like to take off on a trip with no pre- planned routes or timetables (5)	0	0	\bigcirc	0	\bigcirc
I prefer friends who are excitingly unpredictable (6)	\bigcirc	\bigcirc	\bigcirc	0	\bigcirc
I would like to try bungee jumping (7)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc
I would love to have new and exciting experiences, even if they are illegal (8)	0	0	\bigcirc	0	\bigcirc