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The Effect of Ending Disclosure on the Persuasiveness of Narrative PSAs

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Authors' biographies

Daide C. Orazi is an Assistant Professor of Marketing at Monash Business School, Australia. His primary research focus is on consumer psychology, narrative theory, and protection motivation. His research has appeared in *Administrative Science Quarterly*, *International Journal of Research in Marketing*, *Journal of Business Research*, *Journal of Business Ethics*, *European Journal of Marketing*, and *Journal of Advertising Research*, among others. He serves in the Editorial Review Board of the *European Journal of Marketing* and *Journal of Current Issues and Research in Advertising*.

Jing Lei is an Associate Professor of Marketing at the University of Melbourne, Australia. Her research interests are mainly in the area of consumer decision making, especially how consumers make trade-off decisions in various contexts, such as food consumption and financial decisions. Her work has been published in journals such as *Journal of Marketing*, *Journal of Marketing Research*, *Journal of Consumer Psychology*, *Journal of Retailing*, *Journal of Service Research*, and *Journal of Business Research*, among others. She serves in the Editorial Review Board of *Journal of Consumer Psychology*.

Liliana L. Bove is a Professor of Marketing at the University of Melbourne, Australia, and Deputy Head of the Department of Marketing. Her discipline is Service Marketing and her interests span customer and service employee interactions, engagement, loyalty, relationships and welfare. Her work has been published in journals such as *Journal of Service Research*, *Journal of Retailing*, *International Journal of Research in Marketing*, *European Journal of Marketing*, and *Journal of Business Research*, among others. Liliana is an Associate Editor of *Journal of Services Marketing* and a Regional Associate Editor for *Journal of Service Theory and Practice*. She also sits on the Editorial Board of *European Business Review*, *Journal of Business Research*, *Service Industries Journal*, and *Australasian Marketing Journal*.

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Cautionary stories in which misbehavior results in negative outcomes are often used in public service announcements (PSAs) to promote behavioral change. These cautionary stories can either disclose or withhold their endings and the associated negative outcomes for the characters involved. In four experiments, we show that disclosing (vs. withholding) a story's ending increases persuasion due to greater counterfactual thinking about alternative actions that could have prevented the negative outcomes. Integrating these findings within the Transportation-Imagery Model of narrative persuasion, we also show how dispositional levels of need for cognitive closure can amplify the effect of ending disclosure in a PSA. Our findings have important implications for both marketing communicators and policy makers who seek to improve the effectiveness of PSAs.

Keywords: marketing communications; public service announcements; narrative persuasion; counterfactual thinking; story ending.

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1. Introduction

Stories entertain, inspire, and educate (van Laer et al., 2014). For these very reasons, public service announcements (PSA) are increasingly delivered in the form of cautionary stories to help curb dangerous behaviors such as drunk-driving and speeding (Hamby & Brinberg, 2016; Shen, Sheer, & Li, 2015), or increase healthful behaviors such as choosing a balanced diet (de Graaf, 2014). A typical cautionary story follows a clear causal structure whereby the characters' misbehavior or neglect results in a well-defined negative outcome (Kreuter et al., 2007). For example, a road safety PSA aired in New Zealand ([please click here to see the ad](#)) shows two drivers, one speeding and the other distracted, having a brief conversation about their mistakes before time resumes and they collide with each other, resulting in their death. In this case, the PSA ends with a clear outcome (e.g., death) caused by the dangerous behavior (e.g., speeding and distracted driving). In contrast, the designer of the PSA may also choose to withhold the ending of the same story, leaving the audience to wonder what happens next. For example, a speed-driving PSA aired in October 2019 in UK ([please click here to see the ad](#)) portrays a father driving erratically fast while his young daughter and her friend are frightened in the back seats. Suddenly, the father drives through a red light, and the screen fades to black with the sound of brakes screeching. In this case, the PSA ended without revealing a clear ending to the story.

Withholding the ending of a story is a popular narrative trope in entertainment and a source of enjoyment for the audience, who is left to wonder about how the story ended and what happened to the characters (Abuhamdeh, Csikszentmihalyi, & Jalal, 2015). Think about the movie *Inception*: part of its success hinged on withholding its ending, which prompted millions of fans to request an explanation (Business Insider, 2015). Similarly, withholding the

ending of a story is a narrative trope used in narrative PSAs too. A content analysis¹ of the 137 unique narrative PSAs that were broadcasted via television or digital media across 12 European countries in 2019 (Nielsen Ad Intel Portfolio, 2020) revealed that 74 of these narrative PSAs were cautionary stories, 62% of which disclosed their ending (60% a negative ending, 2% a positive ending) and 38% of which withheld it. To further illustrate, the Ministero delle Infrastrutture e dei Trasporti in Italy aired a series of television PSAs between 16 June, 2019 and January 6, 2020. These ads used cautionary stories to imply that unsafe driving practices (e.g., speeding, not wearing seat belts, texting while driving) caused an accident, without disclosing the outcomes for both the protagonist and associated characters.

Well-intended reasons for why designers of such PSAs may use this trope abound: to increase suspense and attention (Abuhamdeh, Csikszentmihalyi, & Jalal, 2015), to motivate through fear for uncertainty that is aversive to most people (Hirsh, Mar, & Peterson, 2012), or to avoid graphic depictions of a specific ending such as death or mutilation for legal and broadcasting reasons (Manceau & Tissier-Desbordes, 2006). Different from entertainment however, the main purpose of PSAs is to persuade consumers to change their risky behaviors (Shen, Sheer, & Li, 2015) and afford a learning opportunity (van Laer et al. 2014). Would withholding the ending of a PSA facilitate or in fact impair this persuasive process?

In line with the above question, there have also been calls for research to examine how such structural elements of stories (e.g., disclose or withhold the ending) can influence persuasion (de Graaf, 2014; van Laer et al., 2014; van Laer et al., 2019). Limited research has responded to this call, and no research has examined how disclosing or withholding a story's ending may affect narrative persuasion. The aim of this research is thus to investigate whether disclosing (vs. withholding) the ending of a cautionary story increases persuasion.

¹The first author and a research assistant blind to the hypotheses independently coded the unique 137 narrative PSAs contained in the dataset. Intercoder reliability was $r = .83$. Disagreement was resolved through discussion.

We predict that disclosing (vs. withholding) the ending of a cautionary story can present a clearer link between a cause (i.e., behavior) and its effect (i.e., negative consequence). This would result in more counterfactual thinking about the alternative courses of actions that could have been used to avoid the negative consequences, and thus increases persuasion (Byrne, 2016; Nasco, & Marsh, 1999). We further test our findings within an established model of narrative persuasion (i.e., the Extended Transportation – Imagery Model: van Laer et al., 2014) and show that the effect of ending disclosure is serially mediated by narrative transportation first, and counterfactual thinking second. Furthermore, we find that the persuasive effect of ending disclosure is enhanced among people high in need for cognitive closure (Roets & Van Hiel, 2011; Webster & Kruglanski, 1994).

The findings of four experimental studies make important contributions to theories of narrative persuasion (Green & Brock, 2002; Hamby et al., 2017; van Laer et al., 2018). First, we provide empirical evidence for the effect of ending disclosure on persuasion, and explain the process underlying this effect. Second, we contextualize the Extended Transportation-Imagery Model (van Laer et al., 2014), a widely cited framework on narrative persuasion, by showing how a story's structural element (i.e., whether to disclose the ending) influences persuasion through the serial process of narrative transportation and narrative thinking (i.e., counterfactuals), contingent on the receiver's dispositional traits (i.e., need for cognitive closure). Last, we provide actionable guidelines for the effective design and tailored delivery of narrative PSAs.

2. Theoretical development

2.1 How narratives persuade

Narratives are sequences of connected events revolving around the resolution of a conflict for the characters involved (Kreuter et al., 2007; van Laer et al., 2014). Narratives persuade not by constructing logical arguments as informational accounts do, but by engrossing the audience into the real or fictional experiences of others, a process termed *narrative transportation* (Green & Brock, 2000; Shen et al., 2015). Narrative persuasion is thus fundamentally different from argument-based persuasion in that the latter relies on the conscious scrutiny of arguments to support or object a conclusion, whereas narrative persuasion occurs through a process of narrative transportation. Narrative transportation entails both emotional and mental stimulation, leading the audience “to focus on the events in the story rather than make counterarguments” (Shen et al., 2015: 106). The process whereby the audience focuses on the events in the story, establishing links and relationships between the story, its characters, and the narrative world, is termed *narrative thinking*. This thought process inhibits the formation of counter-arguments that challenge the story’s persuasive attempt (Escalas, 2004; van Laer et al., 2014), which frequently occurs in argument-based persuasion (Waters, Ball, & Gehlert, 2017). In other words, a transported audience is too cognitively busy engaging in narrative thinking to generate counterarguments against the story’s persuasive attempt (Green & Brock, 2002).

The Extended Transportation-Imagery Model (referred to as ETIM hereafter, van Laer et al., 2014) explains the dynamics of narrative persuasion. In particular, it suggests that both story-related (e.g., characters, structure of the plot) and audience-related factors (e.g., personal dispositions) can influence the extent to which the audience is persuaded by a narrative. In the following sections, we first introduce an important story-related factor—which we term *ending disclosure*, operationalized as the presence of a definite, negative story ending—and articulate our predictions on how it may influence narrative persuasion (Section 2.2 *Story-related factor*). Next, we introduce *need for cognitive closure* (Webster &

Kruglanski, 1994) as a relevant audience-related factor likely to moderate the persuasive effects of ending disclosure (Section 2.3 *Audience-related factor*).

2.2 *Story-related factor: Ending disclosure*

Stories are commonly structured in a way that enables story receivers to infer causal relationships between the unfolding events (Chang, 2009). Causality is thus foundational to a story's structure, as it navigates receivers through the story until its ending. Structurally, the ending of a story represents the "culmination of the temporal dimension that depicts characters in cause-and-effect action sequences, facilitates interpretation of the message meaning, and enables an understanding of the links between character interactions and related effects" (Hamby & Brinberg, 2016: 500). In narrative PSAs, the ending often describes what happens to the characters as a consequence of their misbehavior. A story disclosing the ending presents both the cause (e.g., a misbehavior) and the effect (e.g., the outcome), whereas a story withholding the ending only presents the cause and implies, but not explicitly describes, the effect (please see Table 1 for examples). Specifically, the latter may only imply something, likely negative, has happened after a character's misbehavior, without disclosing what exactly happens. For example, a PSA against drink-driving may simply depict the car running a red light with the sound of brake screeching, implying something negative has happened without revealing what has exactly happened (e.g., the car may have been stopped by the police, driven off the road, or collided with another car). The PSA may also depict the car running a red light followed by a loud sound of impact, implying a crash but withhold the specific consequence to the driver and the passengers (e.g., survived, injured, harmed others, or died from the impact).

Insert Table 1 about here

While both stories that disclose or withhold the ending possess causality in the sense that the characters' actions follow a causal chain of events, only stories disclosing the ending draw an explicit link between the cause and one definite, negative consequence (see Hamby & Brinberg, 2016). In contrast, stories withholding the ending allow for a state of potentiality in which, multiple, although most likely negative, consequences are possible as a result of the misbehavior (Hirsh, Mar, & Peterson, 2012). Research on narrative structuralism suggests that variations in story structure can influence narrative persuasion (Stern, 1995; van Laer et al., 2018), but little research has examined how different structural elements may affect persuasion (see an exception in Hamby and Grinberg 2016). In this research, we examine the effect of an important structural element, ending disclosure, on persuasion.

Not knowing the ending of a story, especially when the ending is anticipated to be negative, is cognitively distressing (Hirsh, Mar, & Peterson, 2012). When a clear associative link between the cause and the effect is missing, consumers attempt to contemplate the possible endings to complete the causal chain of events (McGill, 1989). Indeed, research suggests that consumers viewing or reading a story naturally want to know how the story ends, as it is difficult not to think about the effect after being exposed to the cause (van den Broek, 1998). Therefore, when a narrative PSA withholds its ending, we expect that the audience will devote part of their cognitive resources to imagining the possible consequences and complete the link between cause and effect. This will leave them with limited cognitive resources to internalize the story's takeaways, hindering persuasion. Disclosing the ending, on the other hand, provides a clear and complete causal chain of events between the behavioral causes and their (negative) consequences. Past research suggests that negative

outcomes, either experienced personally or vicariously, are naturally aversive. When exposed to negative events, individuals often engage in upward counterfactual thinking, a thought process whereby individuals imagine what these outcomes would have been if they had acted differently (Byrne, 2016; Epstude & Roese, 2008; McGill, 1989). Upward counterfactual thinking involves a mental comparison between the reality presented and the imagined alternatives, focusing on the generation of alternative actions that could have prevented the negative outcomes (Frosch & Byrne, 2012; McGill, 1989). Importantly, counterfactuals are not to be confused with counterarguments, which are critical thoughts aimed at undermining the validity of logical arguments (cf. van Laer et al., 2014).

In the context of our research, we expect that disclosing the ending can facilitate persuasion through counterfactual thinking in which consumers retrace the causal chain of events to create “what if” alternatives to the presented story. Specifically, counterfactual thinking forms a cognitive schema to guide decisions in future, analogous situations (Byrne, 2016; Nasco & Marsh, 1999) and thus increases the intention to adopt precautionary actions (Epstude & Roese, 2008; Smallman, 2013). As such, a clear, complete link between the depicted (negative) effect (e.g., illness) and its cause (e.g., smoking) is expected to facilitate the adoption of (the proposed) alternative actions (e.g., quit smoking) that removes the cause and hence prevents the negative effect. In contrast, although consumers may also engage in counterfactual thinking in stories that withhold their ending, we expect it to occur to a lesser extent as consumers’ cognitive resources are taxed with the additional task of imagining the possible outcomes. We thus hypothesize that:

H1: Disclosing (vs. withholding) the ending in a narrative PSA increases narrative persuasion.

H2: The effect of ending disclosure is mediated by the extent of counterfactual thinking generated by the audience.

2.3 Audience-related factor: Need for cognitive closure

As discussed earlier, narrative persuasion depends on not only story-related factors, such as ending disclosure, but also audience-related factors, such as the dispositions of the audience (van Laer et al., 2014; see also Fishbein & Yzer, 2003; Green & Brock, 2002). Need for cognitive closure (NFCC), namely a person's motivational need for certainty and causal clarity (Roets & van Hiel, 2011; Webster & Kruglanski, 1994), represents a dispositional trait likely to influence the effects of ending disclosure. A wealth of research that examined the effect of this dispositional trait (e.g., Webster & Kruglanski, 1994; Mannetti et al. 2002) suggests that an individual high in NFCC would react more favorably to stories that have (vs. lack) closure, as it would satisfy the individual's dispositional need for certainty, clarity, and completion. Based on this reasoning, we propose that an individual high (vs. low) in NFCC is more likely to prefer stories that have a clear, definite ending to those that withhold it. Individuals low in NFCC, in contrast, do not have an acute need for certainty, clarity, and completion, and thus may be indifferent to stories that either withhold or disclose their ending. This prediction aligns with both reader-response theory (Scott, 1994) and the ETIM (van Laer et al. 2014), which suggest that a match (vs. mismatch) between the features of a story (e.g., whether the story has a closure) and the receivers' dispositional trait (e.g., NFCC) leads to greater persuasion. Formally stated, we expect that:

H3: The effect of ending disclosure on narrative persuasion is greater among individuals high in NFCC than those low in NFCC.

Importantly, we expect that NFCC will moderate the effect of ending disclosure on narrative persuasion through narrative transportation first and then counterfactual thinking. While prior meta-analytic work finds that dispositional traits can directly affect narrative persuasion through narrative transportation (van Laer et al., 2014), there has been limited research on how dispositional traits may interact with the structural components of a story, such as ending disclosure, to influence narrative persuasion. Specifically, previous research suggests that matching a dispositional need with a situational stimulus increases narrative transportation (van Laer et al., 2014). If this is the case, then people high in NFCC receiving a story that discloses (vs. withholds) the ending should be more (vs. less) transported in it. In contrast, disclosing or withholding the ending would have less impact on narrative transportation for people low in NFCC.

Next, the ETIM (van Laer et al. 2014) explains how states of narrative transportation are likely to generate thoughts about the narrative, events in the story, and links between story plots and among the characters in the narrative world. This process is termed “narrative thinking”. In their future research directions, van Laer and colleagues (2014) suggest some sub-types of narrative thinking may have persuasive power. Based on this reasoning, we argue that the counterfactual thinking process examined in our research is a sub-type of narrative thinking, as counterfactual thinking refers to events in the story and how the story may end should the characters had acted differently. Because narrative thinking is an outcome of narrative transportation (van Laer et al., 2014; Hamby et al., 2017), we suggest that individuals high (vs. low) in NFCC should experience higher narrative transportation first, and then higher levels of ensuing counterfactual thinking, when receiving a story that discloses (vs. withholds) the ending. In summary, we hypothesize that the interactive effect of ending disclosure and NFCC on narrative persuasion will be serially mediated by narrative transportation first, and counterfactual thinking second:

H4: The interaction effect between ending disclosure and NFCC on narrative persuasion is serially mediated by narrative transportation and then counterfactual thinking.

2.4 Overview of studies

We test our hypothesis that ending disclosure increases narrative persuasion in four experiments. Study 1 tests Hypothesis 1 using an ecologically-valid stimulus to ensure the hypothesized effect manifests in common practice. Studies 2A and 2B replicate the effect using scenario-based stimuli while providing process evidence for the proposed mechanism of counterfactual thinking (Hypothesis 2). Study 3 tests Hypotheses 3 and 4 and positions the proposed effects within the Extended Transportation-Imagery Model (ETIM; van Laer et al., 2014). Specifically, study 3 validates two propositions of the ETIM: (1) the structural elements of the story (in our research, ending disclosure) interact with the audience's disposition (in our research, NFCC) to affect narrative persuasion; and (2) narrative thinking (in our research, counterfactual thinking) is an outcome of narrative transportation.

3. Study 1

Study 1 tests the effect of ending disclosure on narrative persuasion using one of the real-life PSAs presented in the introduction.

3.1 Design and procedure

One hundred and forty undergraduate students were recruited from a major public school in exchange for course credit. They were randomly assigned to a video PSA on

inattentive driving and speeding using a single factorial (ending: withheld vs. disclosed) between-subjects design. Nine students who skipped the video before it ended were removed from the dataset, leaving a final sample of 131 students (73 females, $M_{\text{age}} = 19.95$ years). The stimulus presented a short narrative on inattentive driving and speeding, where time stops before two cars collide to give the drivers a long, stop-motion moment in which they acknowledge their mutual errors before the imminent impact ([please click here to see the ad](#)). In the withheld (vs. disclosed) ending condition, the last four-second fragment of the story in which time resumes and the two cars collide was removed (vs. retained). At the end of each video, the message “Other people make mistakes. Slow down” appears. Following random assignment, participants completed measures of persuasion ($r = .66$, items available in Appendix B), and manipulation checks for ending disclosure ($\alpha = .79$) on a 4-item, 7-point Likert scale where 1= not at all, 7= very much, (“The finale of the story leaves a lot of room for speculation”, “The final outcome of the story is uncertain”, “The story does not explicitly state the outcomes”, “The consequences stemming from the characters' actions are not stated”).

3.2 Results

Manipulation checks. Participants in the withheld ending condition reported that the story lacked a clear ending more so than those in the disclosed ending condition ($M_{\text{no-end}} = 3.92$, $SD = 0.96$ vs. $M_{\text{end}} = 3.44$, $SD = 1.53$; $t(129) = 2.11$, $p < .037$).

Persuasion. An independent sample t -test confirmed that participants in the withheld ending condition were less persuaded ($M_{\text{no-end}} = 5.63$, $SD = 1.14$) than those in the disclosed ending condition ($M_{\text{end}} = 6.10$, $SD = 1.00$; $t(131) = 2.42$, $p < .017$).

3.3 Discussion

Study 1 provides preliminary evidence for the main effect of ending disclosure using an ecologically-valid stimulus. Results support Hypothesis 1, showing that participants are more persuaded when the ending is disclosed rather than withheld. The next set of studies aim at replicating these effects using scenario-based stimuli while investigating the mediating role of counterfactual thinking.

4. Study 2A

We design study 2A to test the main effect of ending disclosure on narrative persuasion using a scenario-based stimulus, and provide preliminary evidence for the mediating role of counterfactual thinking.

4.1 Design and procedure

One-hundred-and-forty undergraduate students were recruited from a major public school in exchange for course credit (82 females, $M_{age} = 21.22$ years). The study was a single factorial (ending: withheld vs. disclosed) between-subjects design. A pre-test was conducted prior to study 2A to check the effectiveness and realism of the manipulation (results reported in Appendix A). In the main study, participants were randomly assigned to one of the two experimental conditions regarding a story about drunk-driving where a group of friends enjoying a night out drinking then decide to drive to another party, culminating in a car crash (ending disclosed) or the screech of brakes (withheld; stimulus available in Appendix A). Participants then completed measures of persuasion ($r = .79$), counterfactual thinking ($\alpha = .83$), and fear arousal ($\alpha = .89$). We measure fear arousal as a possible alternative account for our findings, as disclosing (vs. withholding) the ending may persuade by inducing greater

emotional responses, in particular, fear arousal (see fear appeals: Shehryar & Hunt, 2005; Keller & Lehmann, 2008). All scale items are listed in Appendix B.

4.2 Results

Persuasion. Participants assigned to the disclosed ending condition were more persuaded ($M_{\text{end}} = 5.90$, $SD = 1.43$) than those assigned to the withheld ending condition ($M_{\text{no-end}} = 5.36$, $SD = 1.74$; $t(138) = 2.01$, $p < .047$). As previous research on alcohol consumption has shown that gender and age may influence perceptions and behaviors (Grube and Wallack 1994; Russell et al. 2014), we repeated the analyses including age and gender as covariates in a general linear model. The effect of age on persuasion was not significant ($p > .878$) and that of gender was significant ($p < .037$). The main effect of ending disclosure remained marginally significant ($p = .055$) when including these covariates in the analysis.

Counterfactual thinking. Those assigned to the disclosed ending condition also engaged in more counterfactual thinking ($M_{\text{end}} = 6.78$, $SD = 0.38$) in comparison to the withheld ending condition ($M_{\text{no-end}} = 6.47$, $SD = 0.76$; $t(138) = 3.03$, $p < .003$). When repeating the analyses with age and gender as covariates, neither of the two covariates had a significant effect on counterfactual thinking ($ps > .210$).

Fear. No significant difference in fear arousal was found across conditions ($M_{\text{no-end}} = 3.89$, $SD = 1.93$; $M_{\text{end}} = 4.23$, $SD = 1.81$; $p < .264$).

Mediation analysis. The mediation analysis (PROCESS model 4, 10,000 iterations, ending: 0 = withhold; 1 = disclosed) confirmed the significance of the indirect effect of ending disclosure on persuasion through counterfactual thinking ($B = .17$, $SE = .10$, 95% CI = .02 to .42). An alternative model with fear as a parallel mediator showed a significant total indirect effect ($B = .23$, $SE = .12$, 95% CI = .02 to .51), but only the indirect effect of counterfactual

thinking was significant ($B_{IE-CT} = .15$, $SE = .09$, 95% $CI = .01$ to $.37$; $B_{IE-Fear} = .08$, $SE = .07$, 95% $CI = -.04$ to $.27$).

4.3 Discussion

Study 2A provides converging evidence for the main effect of ending disclosure hypothesized in H1. In addition, study 2A provides preliminary process evidence by showing that counterfactual thinking mediates the effect, whereas fear arousal does not. One limitation of studies 1 and 2A however, is that participants in the withheld ending condition may have imagined very different consequences from those disclosed in the ending disclosure condition. Past research suggests that the qualitative nature of a negative consequence can influence consumer reactions (Murdock & Rajagopal, 2017). We thus designed study 2B to rule out the potentiality that the observed differential effect on persuasion was driven by the difference between the nature of the consequences imagined in the ending-withheld condition, and those depicted in the ending-disclosed condition.

5. Study 2B

In this study, rather than pre-determining an ending for the disclosed ending condition, we employed a pre-test to have people generate the likely consequences of a behavior. We did so to ensure that participants in both the ending-disclosed and the ending-withheld conditions processed the same ending, minimizing the possible confound of ending differences in the effect of ending disclosure on persuasion.

5.1 Pre-test

Seventy-seven US adults (44 females, $M_{\text{age}} = 34.09$ years) recruited from MTurk participated in the study in exchange for \$0.50. Participants read a story about an individual who consumes excessive sugar and, after experiencing symptoms of fatigue, decides to see a doctor. The story continues with the protagonist undergoing blood tests and returning to the doctor for a diagnosis. At this point, the story ends. Participants were asked to complete the story with what they imagined the diagnosis to be. Most participants (89%) concluded that the individual was diagnosed with diabetes. The remaining participants reported serious dehydration (6%) or no negative consequences (5%). We used the most frequently imagined consequence (i.e., diagnosis of diabetes) as the story ending for the high closure condition in the main experiment.

5.2 Main experiment: Design and procedure

One hundred and ten participants recruited from MTurk (71 females, $M_{\text{age}} = 33.21$ years) participated in the study in exchange for \$1 and were randomly assigned to one of the two experimental conditions previously pre-tested (stimulus available in Appendix A). Next, participants completed measures of persuasion ($r = .66$), counterfactual thinking ($\alpha = .90$), fear arousal ($\alpha = .92$), and manipulation checks ($\alpha = .87$). All scale items are listed in Appendix B.

5.3 Results

Manipulation checks. Participants in the withheld ending condition reported that the story lacked finality more so than those in the disclosed ending condition ($M_{\text{no-end}} = 5.40$, $SD = 0.78$ vs. $M_{\text{end}} = 2.14$, $SD = 1.17$; $t(108) = 17.20$, $p < .001$).

Persuasion. Participants in the withheld ending condition were less persuaded ($M_{\text{no-end}}$

= 5.22, $SD = 1.17$) than those in the disclosed ending condition ($M_{\text{end}} = 5.95$, $SD = 1.03$; $t(108) = 3.47$, $p < .001$).

Counterfactual thinking. Disclosing (vs. withholding) the ending increased the level of counterfactual thinking ($M_{\text{no-end}} = 4.11$, $SD = 1.58$; $M_{\text{end}} = 5.04$, $SD = 1.35$; $t(180) = 3.31$, $p < .001$).

Fear arousal. Similar to study 1, we found no difference in fear arousal across the conditions ($p > .896$).

Mediation analysis. The mediation analysis (PROCESS model 4, 10,000 iterations, ending: 0 = withhold; 1 = disclosed) confirmed a significant indirect effect of disclosing the ending on persuasion through counterfactual thinking ($B = .41$, $SE = .13$, 95% CI = .17 to .72). We also tested a parallel mediation model that included fear arousal. Consistent with the results in study 1, the total indirect effect was significant ($B = .37$, $SE = .142$, 95% CI = .12 to .66), but only the indirect effect of counterfactual thinking was significant ($B = .37$, $SE = .12$, 95% CI = .15 to .62), whereas that of fear was not ($B = -.01$, $SE = .04$, 95% CI = -.08 to .10).

5. 4 Discussion

Study 2B provides additional process evidence supporting Hypothesis 2 while ruling out competing explanations based on the type of imagined consequences and fear arousal. We kept the depicted ending in the disclosing condition and the mostly likely imagined ending in the withholding condition the same, and found a consistent pattern of results as per studies 1 and 2A. This finding suggests that the impact of ending disclosure on persuasion is not due to the possible differences between the disclosed and the imagined ending in the two conditions. Rather, it is because the audience in the ending-withheld condition need to imagine the (same) ending, leaving them with limited cognitive resources remaining to internalize the key message

and impeding persuasion. We further examine the impact of cognitive capacity on how the audience may generate counterfactual thinking under different ending conditions (disclosed vs. withheld) in a follow-up study (see Web Appendix), providing evidence for our conceptualization that the counterfactual thinking elicited in narrative PSAs is a sub-type of narrative thinking.

Overall, studies 1-2A-2B provide evidence for the effect of ending disclosure on narrative persuasion (Hypothesis 1) through counterfactual thinking (Hypothesis 2). Study 3 was designed to test Hypotheses 3 and 4. Specifically, in study 3 we situate the persuasive effect of ending disclosure within a general framework of narrative persuasion that conceptualizes narrative thinking (in our research, counterfactual thinking specifically) as an outcome of narrative transportation (Green & Brock, 2000; van Laer et al., 2014).

6. Study 3

6.1 Design and procedure

One-hundred-and-sixty-five US residents with a valid driver's license and who indicated that they drank alcohol at least once a week were recruited from MTurk in return for \$1 (80 females, $M_{age} = 35.73$ years). Study 2 was a 2 (ending: withheld vs. disclosed) \times NFCC design, with the ending manipulated between subjects and NFCC measured as a continuous moderator. Following random assignment to a story about drunk-driving (stimulus available in Appendix A), participants completed measures of persuasion ($r = .79$), counterfactual thinking ($\alpha = .91$), narrative transportation ($\alpha = .72$), and the same manipulation and realism checks used in Study 1. Differently from study 1, in which we measured narrative persuasion as a positive change in normative standards (i.e., what people should do), study 3 aims to generalize the effect by measuring narrative persuasion in the form of personal standards (i.e., what the

individual should do). Next, participants completed measures for processing fluency ($r = .82$), a potential alternative account for our results, as people high (vs. low) in NFCC may experience a greater degree of processing fluency when the ending is disclosed (vs. withheld) as a result of the matching hypothesis (e.g., Duhachek, Agrawal, & Han, 2012). Participants then undertook an unrelated task to wash out the effect of the manipulation before completing a subset of the NFCC scale ($\alpha = .84$). All scale items and their reliabilities are listed in Appendix B.

6.2 Results

Manipulation checks. Participants assigned to the withheld ending condition reported lower closure more so than participants assigned to the disclosed ending condition ($M_{\text{no-end}} = 5.52$, $SD = 0.96$ vs. $M_{\text{end}} = 2.63$, $SD = 1.24$; $t(163) = 16.58$, $p < .001$). Perceived realism of the story was not significantly different between the two experimental conditions ($M_{\text{no-end}} = 5.81$, $SD = 1.17$; $M_{\text{end}} = 5.88$, $SD = 1.28$; $t(163) < 1$, $p > .698$).

Persuasion. A linear regression on persuasion showed a significant interaction effect between story ending and NFCC ($\beta = .291$, $F(3, 161) = 8.41$, $p < .004$). Simple effect tests were performed using floodlight analyses (Spiller et al., 2013), locating the Johnson-Neyman points at $JN_{\text{Low}} = 1.44$ and $JN_{\text{High}} = 4.44$ (Figure 1). Ending disclosure had a significant negative effect on persuasion for any model where NFCC was less than 1.44 ($B_{\text{JN}} = -1.08$, $SE = .54$, $p = .05$), but a significant positive effect for any model where NFCC was greater than 4.44 ($B_{\text{JN}} = .38$, $SE = .19$, $p = .05$). This result shows that the effect of ending disclosure on persuasion was greater for people high in NFCC than those low in NFCC. The only other significant effect was that of ending disclosure ($\beta = .158$, $F(3, 161) = 4.62$, $p < .033$). Similar to Study 1, we repeated the analyses including gender and age as covariates, finding only a

significant effect of gender on persuasion ($p < .005$). Both the interaction term ($p < .016$) and the main effect of ending disclosure ($p < .036$) on persuasion remained significant.

Counterfactual thinking. The interaction between ending disclosure and NFCC on counterfactual thinking was also significant ($\beta = .293$, $F(3, 161) = 8.33$, $p < .004$). A floodlight analysis located the Johnson-Neyman point at $JN = 4.24$ (Figure 1), such that disclosing the ending had a significant positive effect on counterfactual thinking for any model where NFCC was greater than 4.24 ($B_{JN} = 0.32$, $SE = .16$, $p = .05$). The effect of ending disclosure on counterfactual thinking was thus greater for people high in NFCC than those low in NFCC. The only other significant effect was the main effect of ending disclosure ($\beta = .199$, $F(3, 161) = 7.17$, $p < .008$). When repeating the analyses with age and gender as covariates, both gender ($p < .010$) and age ($p < .005$) had a significant effect on counterfactual thinking. Both the interaction term ($p < .010$) and the main effect of closure ($p < .010$) on counterfactual thinking remained significant nevertheless.

Narrative transportation. Only the interactive effect was significant ($\beta = .336$, $F(3, 161) = 11.05$, $p < .001$). There were no significant effects of ending ($p < .306$) and NFCC ($p < .905$). A floodlight analysis located two Johnson-Neyman points at $JN_{Low} = 3.07$ and $JN_{High} = 4.86$: disclosing the ending had a significant negative effect on narrative transportation for any model where NFCC was smaller than 3.07 ($B_{JN} = -.41$, $SE = .21$, $p = .05$) but a significant positive effect for any model where NFCC was greater than 4.86 ($B_{JN} = 0.27$, $SE = .14$, $p = .05$). Neither the effect of age or gender on narrative transportation was significant ($p > .294$). As predicted, the effect of ending disclosure on narrative transportation was greater for people high in NFCC than those low in NFCC (Figure 1).

 Insert Figure 1 about here

Moderated serial mediation. Hayes's (2013) PROCESS bootstrapping protocols (model 83, 10,000 iterations, ending: 0 = withheld; 1 = disclosed) were used to test the hypothesis that the interactive effect of ending disclosure and NFCC is serially mediated by narrative transportation and counterfactual thinking. The total indirect effect of the interaction term on persuasion was significant ($B = .41$, $SE = .12$, 95% CI = .18 to .66), and was driven by the indirect effect of narrative transportation ($B = .26$, $SE = .10$, 95% CI = .09 to .49), counterfactual thinking ($B = .10$, $SE = .06$, 95% CI = .01 to .25), and narrative transportation and counterfactual thinking combined ($B = .05$, $SE = .03$, 95% CI = .01 to .13). Figure 2 depicts standardized path associations and Table 2 reports full model estimates.

Ruling out processing fluency. Processing fluency represents a common competing account when studying matching effects (e.g., Duhachek, Agrawal, & Han, 2012). In our research, high-NFCC consumers may experience increased (vs. decreased) processing fluency when decoding narratives that disclose (vs. withhold) the ending. This effect would be justified by a greater degree of correspondence between dispositional need (i.e., high NFCC) and the situational stimulus (i.e., disclosed ending). A linear regression with ending disclosure, NFCC, and the two-way interaction indicated no significant interactive effect on processing fluency ($p < .582$). Neither of the main effects of ending disclosure ($p < .301$) and NFCC ($p < .317$) on processing fluency was significant. We thus rule out processing fluency as an alternative account.

 Insert Figure 2 about here

 Insert Table 2 about here

6.3 Discussion

The results of study 3 support our H3 and H4. In particular, the persuasive effect of ending disclosure is magnified when the story is received by high-NFCC consumers. This interactive effect shows that matching a structural element of the story (i.e., the ending) with consumers' dispositional needs (i.e., NFCC) leads to greater transportation into the story (van Laer et al., 2014; Hamby et al., 2017) and more counterfactual thinking.

7. General Discussion

Prior research has examined why narrative messages are more persuasive than informational accounts in stopping or preventing dangerous behaviors (e.g., Green & Brock, 2002; van Laer et al., 2014). Across four studies, we extend this line of research by examining how one specific structural element of narrative PSAs—disclosing the ending of a cautionary story—can help persuade consumers to adopt precautionary behaviors. We show that disclosing (vs. withholding) the ending increases persuasion (all studies) through increased counterfactual thinking (studies 2A-2B-3), rather than differential levels of fear arousal. Study 3 further demonstrates that the effect is magnified when a narrative PSA with a disclosed ending is received by individuals high in NFCC. Importantly, the effect of ending disclosure on persuasion is serially mediated by narrative transportation first and counterfactual thinking second. The effects are robust across different behaviors and samples.

7.1 Theoretical contributions

Our findings offer key insights to marketing research and the way consumers interpret cautionary stories. We are the first to provide causal evidence for the effect of disclosing a story's ending on persuasion, adding to evidence supporting that structural elements are key to a story's persuasiveness (Escalas, 1998; Stern, 1995; van Laer et al., 2014; van Laer et al., 2018). Our findings broaden the range of antecedents to narrative persuasion detailed in the meta-analytic work of van Laer et al. (2014). Crucially, by isolating a structural element with distinct effects on persuasion, we add to research on narrative structuralism advocating that structural elements are key to a story's persuasiveness (Escalas, 1998; Stern, 1995; van Laer et al., 2014; van Laer et al., 2018). Our findings also complement prior research on the persuasiveness of stories ending positively or negatively (Hamby & Brinberg, 2016). While Hamby and Brinberg (2016) have investigated whether negative or positive endings are more persuasive, we study whether the presence or absence of a negative ending itself is more persuasive.

Importantly, our findings substantially differ from, and should not be confused with, previous research on open vs. closed-ended arguments in advertising. Previous research on open-ended arguments (i.e., let the audience draw their own conclusion, "Now you have the facts, decide for yourself which toothbrush you should buy") found that they can be more effective in inducing positive brand attitude and purchase intention than closed-ended ones (i.e., draw the conclusion for the audience, "Now that you have the facts, try the Winner – Hygent": Sawyer and Howard, 1991; Chebat, Charlebois, & Gelinias-Chebat, 2001; Ahearn, Gruen, & Saxton, 2000). This process is premised on the rational scrutiny and elaboration of informational accounts leading to a conclusion of product superiority, which is a fundamentally different process from the narrative persuasion process relying on narrative transportation and narrative thinking that our research investigates (Green & Brock, 2002; Braverman, 2008; van Laer et al., 2014). Open-ended arguments persuade because they allow

consumers to draw their own conclusions, and these effortful, self-generated conclusions lead to more positive attitude than the less effortful, provided conclusions in a closed-ended argument (Linder & Worchel, 1970; Sawyer & Howard, 1991). Open-ended narratives, on the other hand, hinder persuasion because the effortful cognitive process necessary to complete the narrative prevents counterfactual thinking.

Next, we provide process evidence for counterfactual thinking in a narrative persuasion context. Previous research has mainly focused on emotional reactions underlying the persuasiveness of both fear appeals (Keller & Lehmann, 2008) and narrative messages (Winterich & Haws, 2011). Our finding shows that cautionary stories can affect narrative persuasion beyond their affective influence (e.g., fear arousal, see Keller & Lehmann, 2008, for a list of structural elements with persuasive effects in warning messages), through the cognitive process of counterfactual thinking. Importantly, we empirically validate van Laer and colleagues' (2014) intuition that narrative thinking can hold great persuasive power. We contribute to this stream of research by conceptualizing counterfactual thinking as a sub-type of narrative thinking in the ETIM (van Laer et al., 2014). In this regard, we also answered calls from past research that narrative thinking should not be studied as just an aggregate cognition (Hamby et al., 2017), but as a specific cognitive process resulting from the variation of a story's structure (Escalas, 2004).

Finally, we contribute to theories advocating increased persuasion when the features of a story match individual dispositions, notably reader-response theory (Scott, 1994) and the Extended Transportation-Imagery Model (van Laer et al., 2014). In line with the notion that a narrative is a story in the audience's own interpretation (Fishbein & Yzer, 2003; van Laer et al., 2014), we show that high (vs. low) in NFCC are more persuaded by stories that disclose their endings as these stories are more transporting and induce a greater degree of counterfactual thinking than stories that choose to withhold their ending.

7.2 Practical implications

Our findings provide practical applications for the design and delivery of PSAs in a narrative format. Different from entertainment narratives that often withhold the ending to increase suspense (Abuhamdeh, Csikszentmihalyi, & Jalal, 2015), our research shows that disclosing the ending can lead to better persuasion in a PSA that aims to help change people's risky behaviors. In an exemplary PSA aired in Italy in June 2019 ([click here to see the ad](#)), it portrays a perfect family snapshotting how the parents met, to the day when their daughter was born, until the moment when they enter a car and do not buckle themselves in. The PSA ends with the screen fading to black and a crashing sound, without disclosing the consequences. Our findings suggest that the effectiveness of this ad would have been enhanced by disclosing the ending, rather than withholding it and leaving the audience wondering what happened to the family in the story.

A second practical implication of this research pertains the importance of tailoring communications to specific audiences. Hirsh, Kang, and Bodenhausen (2012) show that tailoring messages based on the receiving audience's personality traits lead to more positive message evaluations, compared to one-size-fits-all campaigns. Our results align with this finding in that consumers are more or less transported depending on whether ending disclosure matches their dispositional level of NFCC. In the age of programmatic advertising and tailored delivery, accurate personality profiles can be text-mined from social media platforms (Back et al., 2010). For example, data on consumers' personality is widely available on the Internet in the forms of content posted on Twitter (for textual automated analysis) and Instagram (for visual recognition analyses). Consumers' digital footprints such as likes, mentions, and any metric extracted from the posted content are publicly available

and can be analyzed and used to profile psychological traits. For instance, Vermeir, van Kenhove and Hendrickx (2002) found that people high in NFCC search for, and use more extensively information to guide their purchase choices. As such, researchers are able to profile an individual's NFCC level by analyzing his or her online search behaviors (e.g., through Google Analytics). Once this data is available, providers of online narrative PSAs can leverage this information to ensure that PSAs targeting individuals high in NFCC do reveal a cautionary story's ending.

7.3 Limitations and future research

While we ruled out fear arousal (studies 2A-2B) and processing fluency (study 3) as alternative accounts to counterfactual thinking, future research is warranted to provide more conclusive process evidence. Other discrete emotions can differentially influence persuasion. For example, disclosing (vs. withholding) the ending may lead to different levels of emotions such as anticipation and alertness (Baumgartner, Pieters, & Bagozzi, 2008), and suspense and uncertainty (Winterich & Haws, 2011), which may affect persuasion. We fully acknowledge that stories evoke emotions; however, what we focus on is how narrative thinking affects persuasion, a more cognitive path that has so far received much less attention (see van Laer et al., 2014). It is also possible that disclosing the ending leads to more vivid imagery of the story (van Laer et al., 2014). Future research may explore the role of mental simulation and imagery vividness in persuasion when the ending is disclosed versus withheld.

On a concluding remark, we note the differences and complementarities between counterfactual thinking and retrospective reflection. Recent research identifies retrospective reflection, namely "the recall of self- or other-relevant memories evoked by transportation into a story" (Hamby et al., 2017: 17), as a type of narrative thinking that helps consumers to create correspondences between the story and their own world to better understand and

accept the story-implied beliefs. We assert that counterfactual thinking is substantially different from retrospective reflection. Counterfactual thinking emerges as a preparative response based on the events depicted in the story: alternative actions are extracted from the story world and then transferred to everyday life in the form of cognitive schemas that will aid future decision making (Byrne, 2016). Despite the difference between retrospective reflection and counterfactual thinking, when consumers hold strong beliefs or have prior relevant experiences about the focal topic of the story, the two types of narrative thinking may co-occur. A promising avenue for future research is to compare the two cognitive mechanisms of counterfactual thinking and retrospective reflection on narrative persuasion in stories containing self-referent cues.

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TABLES & FIGURES

Table 1: Variations in closure based on withholding versus disclosing the ending

<i>Story</i>	<i>Low closure</i>	<i>High closure</i>	<i>Example</i>
Behavior	Disclosed	Disclosed	Friends meet at a pub and commence drinking in earnest. After a couple of hours, they decide to take their car and drive to a nearby party. One friend suggests taking a cab, but this idea is dismissed by the others. The car speeds through the night, the inebriated friends are laughing and joking. Suddenly, they run a red light.
Consequences	Withheld (causality with no finality)	Disclosed (causality with finality)	After running the red light, the car collides with a motorcyclist, instantly killing him.

Table 2: Path estimates for full model (study 3)

<i>Specified paths</i>		<i>B</i>	<i>SE</i>	<i>Sig.</i>
Ending disclosure × NFCC	→ Narrative transportation	.34	0.11	**
Ending disclosure × NFCC	→ Counterfactual thinking	.28	0.14	**
Ending disclosure × NFCC	→ Narrative persuasion	.10	0.13	$p < .461$
Narrative transportation	→ Counterfactual thinking	.37	0.09	**
Narrative transportation	→ Narrative persuasion	.73	0.10	***
Counterfactual thinking	→ Narrative persuasion	.35	0.08	**
Ending disclosure	→ Narrative transportation	.02	0.12	$p < .890$
Ending disclosure	→ Counterfactual thinking	.42	0.15	*
Ending disclosure	→ Narrative persuasion	.25	0.15	^
NFCC	→ Narrative transportation	.02	0.08	$p < .784$
NFCC	→ Counterfactual thinking	-.02	0.09	$p < .783$
NFCC	→ Narrative persuasion	.07	0.09	$p < .451$

Notes: NFCC = need for cognitive closure; *** p -value < 0.001; ** p -value < 0.01; * p -value < .05; ^ p -value < .10.

Figure 1: Ending disclosure × NFCC area of interaction on narrative transportation, counterfactual thinking, and persuasion (study 3)

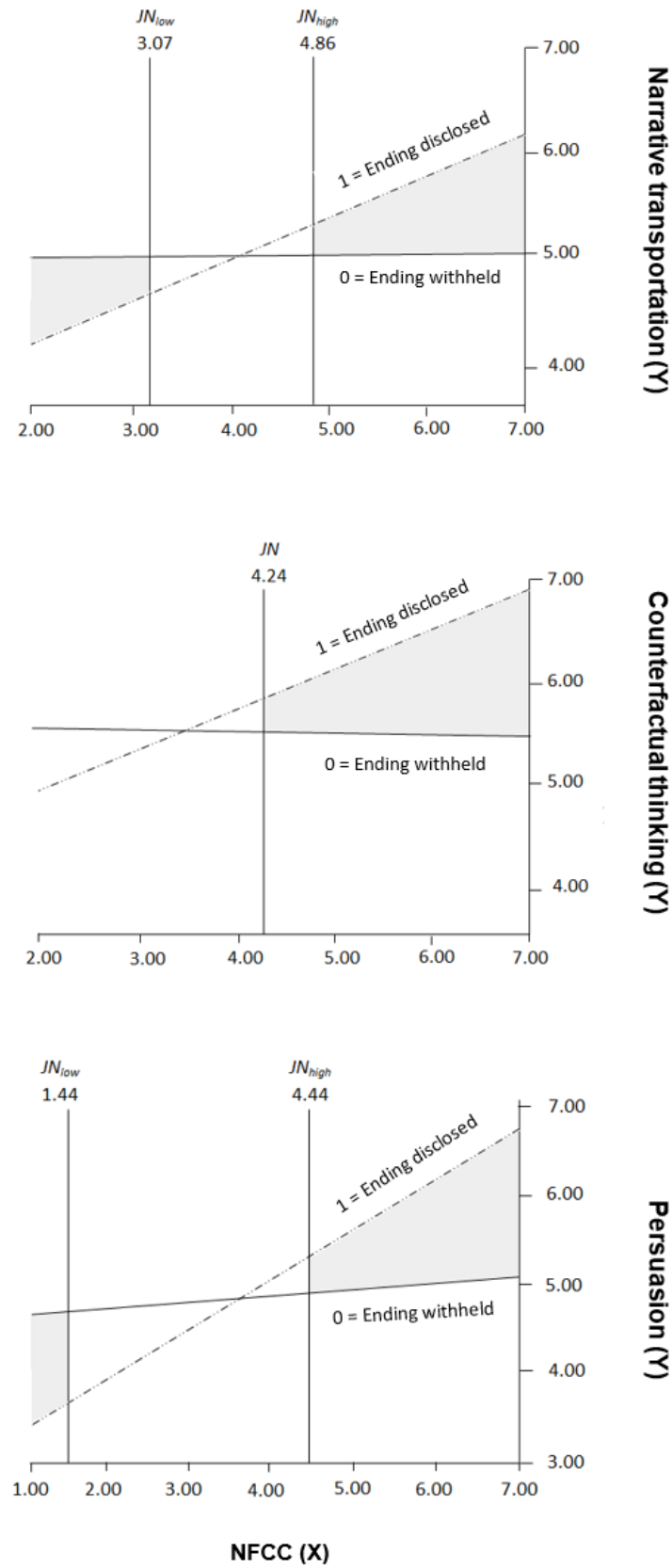
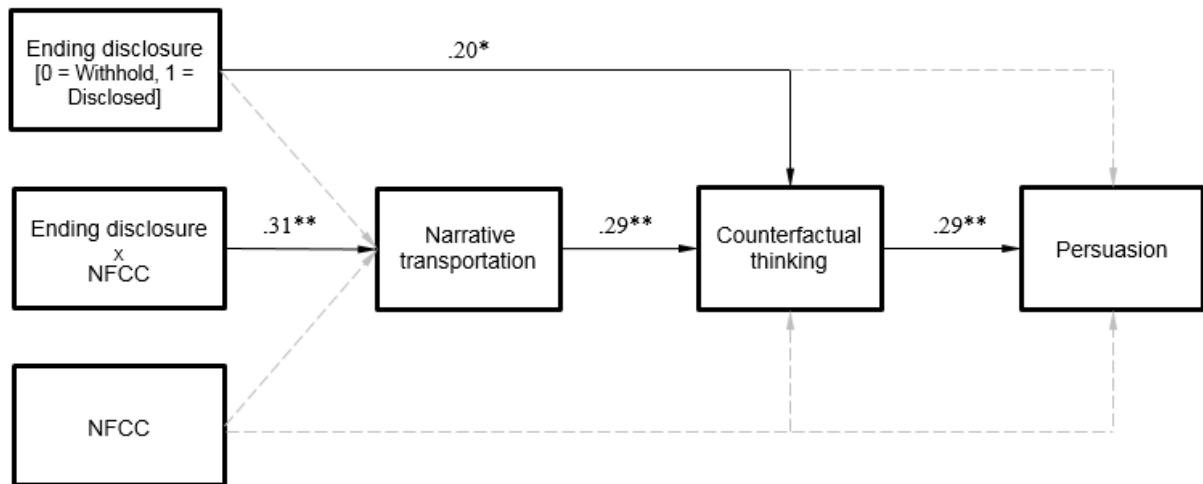


Figure 2: Moderated serial mediation (study 3)



Notes: *** p -value < 0.001; ** p -value < 0.01; * p -value < .05. Dashed paths in grey represent non-significant relationships. Non-significant intermediate mediating paths have been omitted for visual clarity.

APPENDIX A – STIMULI, PRE-TESTS, AND POST-TESTS

A.1 Study 2A stimulus – drunk-driving

Ending withheld: Matt, Carl, Lucy and Jessica meet at the local pub for a few drinks. They play a couple of games of pool and drink about five standard drinks each over two hours. After two hours, Lucy gets a text from a friend and tells the group “Hey guys, Greg is having a party in his new apartment in the city and we are all invited! Let’s go!” The idea is accepted with enthusiasm and the group walks outside the pub. Carl says “Let’s take my car, we’ll be there in ten minutes.” Jessica objects “Wouldn’t a taxi be a better option? What if they pull you over?” Carl dismisses Jessica’s concerns “I’m just buzzed, I’m fine!” The four get into the car and Carl turns the ignition key, speeding out of the parking lot. The music is pumping in the car and the group is singing. Carl runs a red light. Suddenly, the music is drowned out by the screech of brakes.

Ending disclosed: as above, plus ending “A crashing sound follows. The car collides with a motorcyclist, who is killed on impact.”

Pre-test

A pre-test was conducted prior to study 2A to check the effectiveness and realism of the manipulation. Fifty-six US adults (26 females, $M_{\text{age}} = 35.35$ years) recruited from MTurk were randomly assigned to one of two experimental conditions (ending: withheld vs. disclosed). They were randomly assigned to the stimulus described above. Next, participants completed manipulation checks for ending disclosure ($\alpha = .90$) on a 4-item, 7-point Likert scale where 1=not at all, 7=very much, (“The finale of the story leaves a lot of room for speculation”, “The final outcome of the story is uncertain”, “The story does not explicitly state the outcomes”, “The consequences stemming from the characters' actions are not stated”). Participants also rated the perceived realism of the story using a one item

measurement (“Thinking back to the story, to what extent it was realistic?” 1 = extremely unrealistic, 7=extremely realistic). The manipulation was successful, with participants in the withheld ending condition reporting a higher score on the measure ($M_{\text{no-end}} = 4.47$, $SD = 1.12$) than those in the disclosed ending condition ($M_{\text{end}} = 2.65$, $SD = 1.45$; $F(1, 54) = 27.56$, $p < .001$). Importantly, the two manipulations were not significantly different in terms of perceived realism ($M_{\text{no-end}} = 6.24$, $SD = 1.21$; $M_{\text{end}} = 6.15$, $SD = 0.95$; $t(54) < 1$, $p > .751$) yet in both conditions the story was perceived to be realistic (i.e., both means are significantly higher than the scale mid-point 4, $p < .001$).

A.2 Study 2B stimulus – sugar overconsumption

Ending withheld: In the past eight years, Andrea has drunk the equivalent of two glasses of soda almost every day. Andrea is very confident that, due to a rigorous exercise routine, the risk of developing health issues due to high sugar intake is extremely low. However, lately Andrea has been feeling thirstier and more fatigued than usual, with occasional blurred vision. Andrea’s doctor is concerned that the symptoms may be indicative of a negative health condition and asks Andrea to undergo several blood tests. One week later, the doctor calls Andrea to his office to discuss the results of the blood tests. With a worried expression, the doctor begins to talk.

Ending disclosed: as above, plus ending: “Andrea, there is no easy way to say this, but you have Type 2 diabetes.”

Post-test

A post-test was conducted after study 2B to check the realism of the manipulation. Sixty-five-six US adults (27 females, $M_{\text{age}} = 36.60$ years) recruited from MTurk were randomly assigned to one of two experimental conditions (ending: withheld vs. disclosed) described above and asked to rate the perceived realism of the story using the same item as

previous studies. The two conditions did not significantly differ in terms of realism ($M_{\text{no-end}} = 6.03$, $SD = 1.08$ vs. $M_{\text{end}} = 6.26$, $SD = .96$; $t(63) = .92$, $p = .362$). Importantly, in both conditions the story was perceived to be realistic (i.e., both means are significantly higher than the scale mid-point 4, $p < .001$).

A.3 Study 3 stimulus – drunk-driving

Ending withheld: I hear a thumping from a long way off, am I dreaming? I slowly open my eyes and the brightness is overwhelming. I realize I am not dreaming it's someone knocking at my door. I try to sit up, but my head spins and a searing ache settles above my right eye. My mouth is so dry and bitter and for a minute I wonder where I am. The knocking continues this time with greater impatience. I drag myself up from the sofa and stagger to the front door, where I peep into the spyhole. It's Matt, my long-time buddy. It has been a while since we have caught up. I open the door and he hugs me. "Long time, no see man! I have great news! New job, new girlfriend, new life! We have to celebrate! Let's go to the pub and play pool like the old days!" I hesitate, unsure of what to say. "Err I don't know...I don't think it's such a good idea, what time is it anyway?" "Time? 5 pm man, time to get out of here and celebrate over a few drinks" said Matt. "Look, you can't let me down, have a shower, drink some water, you'll be right". I could see there was little point arguing, Matt wasn't the type of person who would accept a no, so I just gave in. We took my car and drove to our favorite pub and started playing pool. After five rounds of beers and a couple of shots, I could feel Matt's mood starting to change. He became edgy and convinced himself that a group of guys on the other side of the room were mocking us. "Have you any idea what they are laughing at?" asked Matt in an angry voice. "Never mind man, let's have another pint". By that time, I was very drunk and tired. My car was just outside. I just wanted to go home and sleep. It was only a 15-minute drive. I hesitated, uncertain as to what to do: anything

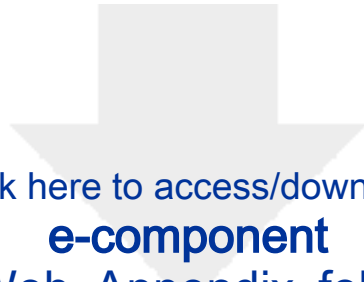
could happen. Matt could vomit in the car, or the police could pull us over, or even worse, we could have a road accident. Then Matt and I exit the pub. I turned the ignition key and sped out of there. Matt calmed down and quickly fell asleep. Weariness overwhelmed me, only 15 minutes and then I could rest. I started to speed and tailgate cars, I was so desperate to get home. I had a bad feeling. And then it happened.

Ending disclosed: as above, plus ending “I ran a red light and hit a motorbike, throwing off the rider. He died that very moment.”

APPENDIX B – MEASURES AND ITEM RELIABILITIES ACROSS STUDIES

Measures ²	Study 1	Study 2A	Study 2B	Study 3
Persuasion				
<i>Study 1</i>	$r = .71$			
i. I will ensure I comply with the speed limit next time I drive				
ii. The Government should increase funding for road safety awareness campaigns.				
<i>Study 2A</i>		$r = .79$		
iii. Penalties for traffic offences should be increased.				
iv. The Government should increase funding for road safety awareness campaigns.				
<i>Study 2B</i>			$r = .66$	
i. I will try to reduce my consumption of sugar				
ii. Next time I am thirsty, I will go for a no-sugar option				
<i>Study 3</i>				$r = .79$
i. Next time I go out drinking, I will make sure I am not driving back				
ii. Next time I go out drinking, I will plan a safe return home				
Counterfactual thinking (Rye et al., 2008)		$\alpha = .83$	$\alpha = .90$	$\alpha = .91$
i. If only the characters would have acted differently, this situation would have never happened.				
ii. I think about how alternative courses of action could have avoided the outcome.				
iii. I think about how much better things could have been for the characters in the story.				
iv. If different decisions were taken, the story would have ended happily.				
Fear arousal (Murdock & Rajagopal, 2017)		$\alpha = .89$	$\alpha = .92$	-
Please indicate how the story made you feel:				
i. 1-not fearful at all, 7-very fearful				
ii. 1-not anxious at all, 7-very anxious				
iii. 1-not nervous at all, 7-very nervous				
Narrative transportation (adapted from Escalas, 2004)		-	-	$\alpha = .72$
i. I could picture myself in the scene described in the story				
ii. While thinking about the story, I could easily picture the events taking place				
iii. I was mentally involved in the story				
iv. I was emotionally involved in the story				
Need for cognitive closure (adapted from Roets & van Hiel, 2011)		-	-	$\alpha = .84$
i. I don't like situations that are uncertain.				
ii. I feel uncomfortable when I don't understand the reason why an event occurred in my life.				
iii. I don't like to go into a situation without knowing what I can expect from it.				
iv. I dislike it when a person's statement could mean many different things.				
v. I dislike unpredictable situations.				
Processing fluency (Duhachek et al., 2012)		-	-	$r = .82$
The story was:				
i. 1-difficult to read, 7-easy to read				
ii. 1-difficult to understand, 7-easy to understand				

² All measures taken on Likert scales 1-strongly disagree; 7-strongly agree unless stated otherwise



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