

MORAL INTUITION PROMINENCE IN NARRATIVES SHAPES  
AUDIENCE ATTENTION AND AFFECTIVE DISPOSITIONS

By

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## ABSTRACT

### MORAL INTUITION PROMINENCE IN NARRATIVES SHAPES AUDIENCE ATTENTION AND AFFECTIVE DISPOSITIONS

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The affective disposition theory (ADT) of drama suggests that moral judgments of a narrative character's actions are a key determinant of character and story appeal. Specifically, approbation of behaviors prompts positive character dispositions and subsequent story liking. The modified affective disposition model (MADM; Tamborini, Grizzard et al., 2021) attempts to expand ADT by (a) explicating mechanisms that influence how dispositions are formed in morally complex storylines, (b) identifying factors that moderate these mechanisms, and (c) describing the mental processes that underlie them. ADT argues that narrative audiences are constantly monitoring the morality of a character's behavior (Zillmann, 2000), and disposition formation is shaped by these moral appraisals. The theory suggests that people like characters that behave morally and dislike those that do not, but it gives little detail about how people make moral appraisals. The MADM builds on recent research indicating that moral appraisals are strongly influenced by character behaviors upholding or violating those moral intuitions most salient in the minds of audience members. In doing so, MADM attempts to explicate the mechanisms that increase or decrease the salience of competing intuitions in morally complex stories (i.e., stories wherein two or more moral intuitions are in conflict such that a character must violate one intuition to uphold another). According to the MADM, the salience of different moral intuitions in audience members is shaped by narrative exemplars that vary the prominence of different moral intuitions in the narrative.

Specifically, it suggests that when storylines are morally complex, the level of a competing intuition's prominence in content will strengthen the intuition's salience in the minds of audience members and the attention that audiences give to intuition-related information. The influence of this prominence on the salience of and attention to different intuitions by audience members is predicted to moderate the disposition process and shape both (a) whether positive or negative dispositions are formed, and (b) whether dispositions are formed intuitively or deliberately. This dissertation tests these proposed expansions using a 2 X 2 experiment that manipulates the prominence of two conflicting moral intuitions in content (i.e., dominantly vs. overwhelmingly prominent) and whether a character upholds the prominent intuition (i.e., upholds vs. violates).

The study results reveal two important findings. The first finding suggests that the comparative prominence of conflicting intuitions in content can influence the level of salience in the minds of audiences, which in turn strengthens or weakens the effect of observing a moral/immoral behavior on approbation. Higher prominence of the superordinate intuition weakens the strength of the subordinate intuition's salience, which then weakens its ability to moderate the effect of upholding the superordinate intuition on approbation. The second finding suggests that different levels of comparative prominence (dominant versus overriding) can alter whether affect disposition (i.e., character liking) is formed intuitively or deliberately. When the prominence of a superordinate intuition is dominant, disposition formation is intuitive. By comparison, when the prominence of a superordinate intuition is overriding, disposition formation is deliberative. The theoretical and social implications of these findings are discussed.

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## INTRODUCTION

Moral conflict is a key component in making narratives engaging and emotional for audiences. In many stories, conflict is created by introducing characters with different moral values and pitting them against each other. Audience appraisal of the conflict's outcome is considered a key determinant of the story's appeal, with enjoyment increased by an honorable protagonist's reward or a dishonorable antagonist's punishment (Raney, 2006). In such cases, the conflict faced by a protagonist comes from an external source, the antagonist (Hopp et al., 2020). However, this is not the only way to create moral conflict. In some stories, creators confront the protagonist with internal conflict, by placing a character in situations where competing moral values are at play. For example, in the film *Les Misérables*, the protagonist Jean Valjean must choose to either break the law to care for an orphaned child or leave the child to suffer. In such stories, audiences' appraisal of the protagonist's choice and the overall appeal of the story is thought to be shaped by the moral values most important to the audience when they are evaluating the character's behavior. Moreover, the manner in which narratives highlight and resolve the conflict between competing values may play an important role in shaping these appraisals.

Entertainment theory has recognized that judgments of a character's morality are not only critical in determining audience appraisal of the story, but also in shaping the narrative's impact on social attitudes and behaviors (Bandura, 1986). However, little research has examined the mechanisms that underlie moral judgments of characters confronted by moral conflict or how this conflict influences appeal. The current study attempts to fill this gap.

Affect disposition theory (ADT; Zillmann, 2000; Zillmann, 2013; Zillmann & Cantor, 1977) is one of the most widely cited theories in research on narrative entertainment (Eden et al.,

2013; Raney & Bryant, 2019; Vorderer et al., 2021). In basic terms, ADT describes mechanisms through which the moral monitoring of a narrative character's behaviors shapes audience dispositions toward that character, their hope for the character's good/ill fortune, and their like/dislike for the story's resolution. In short, ADT says audiences like to see good things happen to good people and bad things happen to bad people. Extensive scholarship has supported the basic mechanisms outlined by ADT (e.g., Grizzard et al., 2018; 2019; 2021; Krakowiak & Oliver, 2012; Raney, 2002, 2005; Tamborini et al., 2018; Weber et al., 2008; Zillmann & Bryant, 1975; Zillmann & Cantor, 1977).

Recent research on the modified affective disposition model (MADM; Tamborini, Grizzard et al., 2021) attempts to explicate ADT by identifying factors that moderate ADT processes. The current study attempts to advance research in this area by testing the MADM's description of factors that moderate ADT in narratives that highlight conflict between salient intuitions. It does this in two parts.

First, it examines two factors that moderate the influence of character behavior on audience disposition formation: the comparative accessibility of conflicting moral intuition in an audience member's mind, and the attention paid by audience members to narrative cues associated with salient intuitions. Second, it examines the speed of disposition formation to test MADM-based logic describing that intuitive and deliberative mechanisms govern disposition formation. These two parts are discussed in turn.

## **FACTORS MODERATING CHARACTER BEHAVIOR'S EFFECT ON DISPOSITION FORMATION**

ADT (Zillmann, 2000) reasons that story content showing characters behave morally induces positive audience appraisal of characters (i.e., morality and appeal) to shape processes that govern story appeal. While presenting these processes, ADT offers specific predictions about how character behaviors influence affective dispositions and how outcomes that befall liked and disliked characters shape story appeal. Zillmann (2000, 2006, 2013) outlined these predictions in his seven-stage model. Each stage in the models describes the processes governing an audience member's emotional reactivity during different parts of a narrative. The first four stages outline the disposition formation process while the last three stages describe disposition's influence on subsequent appraisals.

In the first stage of the model, audiences attend to and perceive a narrative character's "actions and their apparent purpose" (Zillmann, 2006, p. 230). Following this perception, Stage 2 outlines how audiences, who function as untiring moral monitors, access observed behaviors as moral or immoral. Accordingly, moral behaviors are approved, and immoral behaviors are disapproved. Based on audiences' approbation or disapprobation of behaviors, audiences will then develop positive or negative affect disposition toward the character during Stage 3. These affective dispositions facilitate audiences' empathic or counter-empathic responses to the happenings that befall the character throughout a story. From this, in Stage 4, anticipatory emotions (i.e., hope and fear) emerge in response to audience members' desire for good things to happen to liked characters and bad things to happen to disliked characters.

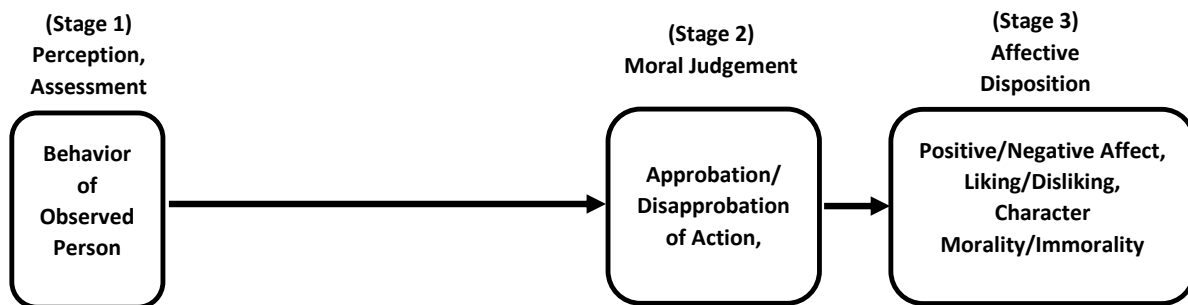
Lastly, the back half of the model represents audiences' responses to befalling the character and the story's ultimate outcome. Here, the model shows that audiences attend to and

perceive events (Stage 5), which in turn elicit either accordant or discordant affect in line with their dispositions toward the character (Stage 6), eventually resulting in judgments toward the story's outcome as just or unjust (Stage 7). If audiences appraise the outcome for the character as just, then story liking is increased. If it is considered unjust, story liking is decreased.

The most relevant parts of Zillmann's model for the present investigation are Stages 1 through 3, wherein ADT describes that perceiving a character's behavior as moral increases audience approval of that behavior, which subsequently increases positive appraisal of the character to shape subsequent ADT processes (see Figure 1).

**Figure 1**

*Stages 1 to 3 of Zillmann's ADT Model*



*Note.* Simplified model of the deposition formation process. Character behavior is observed followed by approval/disapproval, followed by the formation of a disposition (e.g., like/dislike) (Tamborini, Grizzard et al., 2021).

Unfortunately, ADT does not explain what makes audiences perceive a character's behavior as moral. However, more recent work in entertainment theory addresses this issue. In reviewing this work (and elsewhere in the following exposition), the discussion frequently references several theories and concepts whose lengthy names are reduced to acronyms for simplicity. Given the large number of acronyms used, a table describing these acronyms is presented here for simple reference.

**Table 1**

*Abbreviations used in this Dissertation*

Abbreviation	Meaning
ADT	Affective Disposition Theory
MADM	Modified Affective Disposition Model
MIME	Model of Intuitive Morality and Exemplars
MFT	Moral Foundations Theory
NEAR	Narrative Enjoyment and Appreciation Rationale
C-NIEP	Comparative-Narrative Intuition Exemplar Prominence
AIS	Audience Intuition Salience

The model of intuitive morality and exemplars (MIME; Tamborini, 2011, 2013) describes the mechanisms that govern audience judgments of a character’s morality. According to the MIME, an audience member’s perception of character behavior as moral/immoral is shaped by judgments of whether the behavior upholds or violates an innate set of moral intuitions.<sup>1</sup> More specifically, the MIME suggests that moral judgments are based on perceptions of whether the character’s behavior upholds/violates moral intuitions that are most salient in the minds of audience members at the time of appraisal.

The MIME applies moral foundations theory (MFT; Haidt & Joseph, 2007) to define moral intuitions as universally shared “bits of mental structures” that have evolved to activate positive/negative affect (akin to gut feelings) in response to moral/immoral actions or entities (p. 381). Logic underlying the model suggests that affect imbued in a moral intuition can be primed by cues in a person’s environment (including cues contained in media content). While non-

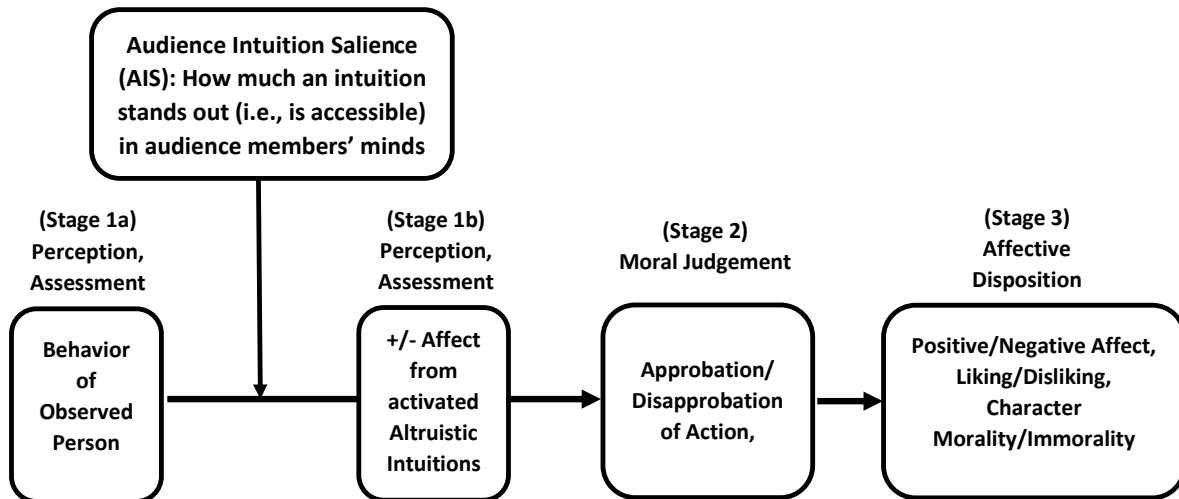
exhausted, MFT identifies five moral intuitions that represent specific domains of prosocial motivations. These include care, fairness, ingroup loyalty, respect for authority, and purity.

The care domain is comprised of sensitivities that motivate empathy and the need to alleviate the distress of others. The fairness domain involves the need to advocate for justice, honesty, or the equitable distribution of resources. Ingroup loyalty motivates individuals to align themselves with their ingroup and against outgroups. Respect for authority involves deference to dominance hierarchies, social structures, and traditions. Finally, purity is a sensitivity that increases a desire to pursue nobility, while avoiding physical and social contaminants. The MIME suggests that observing a character uphold any salient intuition should produce positive affect while observing its violation should produce negative affect.

The MADM (Tamborini, Grizzard et al. 2021) expands on the MIME's description of how the upholding/violation of salient moral intuitions can shape moral judgments of behavior by identifying factors that can moderate the influence of salient intuitions on these judgments. According to the MADM, moral judgment of a character's behavior is governed by the positive/negative affect that is produced when activated moral intuitions are upheld/violated. Notably, the affect produced by upholding/violating an activated intuition is strengthened/weakened (i.e., moderated) by the extent to which the intuition stands out in the minds of audience members (i.e., is more accessible in pre- or post-conscious processing). This moderation is depicted in Figure 2. The MADM applies this description specifically to stories that feature narrative conflict (i.e., when a protagonist must violate one intuition to uphold another) to describe the effect of upholding/violating a story's superordinate intuition (i.e., the one made more prominent or conspicuous by cues in a narrative) in different contexts.

**Figure 2**

*MADM's Addition to Stages 1 to 3 of Zillmann's ADT Model*



*Note.* MADM's modification of the simplified ADT model of the disposition formation process. The degree to which altruistic intuitions upheld or violated stand out (i.e., are accessible in the minds of audience members) moderates positive/negative affect associated with upholding/violation of the related intuition to shape approval/disapproval of behavior. This is followed by the formation of character disposition (e.g., like/dislike).

Part 1 of the current study examines the impact of two factors thought to moderate the saliency of different moral intuitions, and thus strengthen/weaken the influence of narrative behaviors that uphold/violate these intuitions on audience appraisal of a character's behavior and subsequent appeal to shape resulting ADT processes. The first factor is the comparative accessibility of the conflicting moral intuition in the minds of audiences (i.e., referred to here as comparative-audience intuition saliency). The second is the level of attention that audience members give to narrative cues associated with accessible intuitions.

### **The Moderating Impact of Audience Intuition Saliency on Disposition Formation**

Theories of cognition suggest that humans have evolved, intuitive motivation systems that function to orient affective responses towards environmental stimuli (James, 1890; Cacioppo & Gardner, 1999). For example, the top-of-head phenomenon (Taylor & Fiske, 1978) suggests

that encoding key environmental stimuli can activate innate mental systems, making associated motivation concepts related to them quickly accessible in the working memory. This ease to activate motivational systems, or *salience*, can not only influence important judgments about the benefit of the self, but the salience of a moral intuition can shape judgments of right or wrong (Haidt & Joseph, 2007).

According to the MADM, the accessibility of an intuition in an audience member's mind (i.e., audience intuition salience; AIS) strengthens the effect of character behaviors that uphold/violate that intuition on approbation. When intuitions are highly accessible, their influence on judgments increases such that behaviors upholding the intuition are appraised more positively whereas those violating the intuition are appraised more negatively. Notably, the model's description of how audience intuition salience affects judgments of character behavior is identical regardless of whether intuition salience is temporary (i.e., momentarily induced by some event in the environment) or chronic (i.e., a characteristic trait). The current study attempts to demonstrate how narrative cues can vary the temporary accessibility of conflicting intuitions and, by doing this, alter audience approval of character behavior and subsequent ADT processes.

The MADM suggests that audience intuition salience can be temporarily strengthened or weakened by varying the extent to which one intuition is made more prominent (i.e., made to stand out or be conspicuous by cues in a narrative) in the story than another intuition. This can be accomplished in narratives with moral exemplars (i.e., narrative cues that “share primary features in common with” a moral intuition; Tamborini, 2013, p. 47; see also Zillmann, 2002). In narratives featuring intuition conflict, narrative cues (i.e., exemplars) can be used to increase the salience of two conflicting intuitions. In such cases, the *comparative* prominence of exemplars in content may be unequal, making one intuition more salient (i.e., more accessible in an audience



member's mind) than the other, and thus strengthening the influence of this intuition on subsequent appraisals.

Based on the logic underlying exemplification theory (Zillmann, 2002; Zillmann & Brosius, 2000), a moral-intuition exemplar's comparative prominence can be strengthened or weakened by its availability (i.e., the exemplars' immediacy in content) and representativeness (i.e., the extent that exemplars typify the intuition domain they represent; Tversky & Kahneman, 1974). An exemplar's availability and representativeness, in turn, can be shaped by how it is portrayed in content. Specifically, a moral-intuition exemplar's comparative prominence can be strengthened by its emotionality, concreteness, and both the recency and frequency of its presentation. In other words, making an exemplar of one domain more emotional, concrete, prevalent, or recently presented compared to exemplars representing other domains can make that exemplar stand out more.

Thus, in simplified terms, *comparative narrative intuition-exemplar prominence* (C-NIEP) refers to the comparative prominence with which moral exemplars are portrayed in a narrative (Tamborini, Baldwin et al., 2020). In storylines where a protagonist is confronted with a moral dilemma, C-NIEP can be used to emphasize which of the competing intuitions is more important (i.e., superordinate) and which is less important (i.e., subordinate).

The use of C-NIEP in stories to emphasize the importance of one intuition over another may be quite noticeable when comparing narratives within the same genre. For example, in war movies, dialog and visual cues may include frequent and emotional exemplars of patriotism and loyalty (e.g., the American flag, discussion about protecting the homeland, etc.) that are either made superordinate or subordinate to concerns about the suffering of others during wartime. In *Saving Private Ryan*, the emphasis on the need to find a missing in-group soldier (by using

exemplars of loyalty) dominates concerns about causing harm. By comparison, the movie *Apocalypse Now* uses both American iconographies (i.e., exemplars of loyalty) and an emphasis on the suffering of victims (i.e., exemplars of care) to make both intuition domains salient to audiences.

### Figure 3

#### *Conceptual Definition & Operational Example of Comparative-Narrative Intuition Exemplar Prominence*

- **Comparative**

Refers to dominant vs. overriding conspicuousness of narrative cues representing competing intuition domains, explicated in terms of features defining narrative, intuition exemplar, and prominence.

- **Narrative**

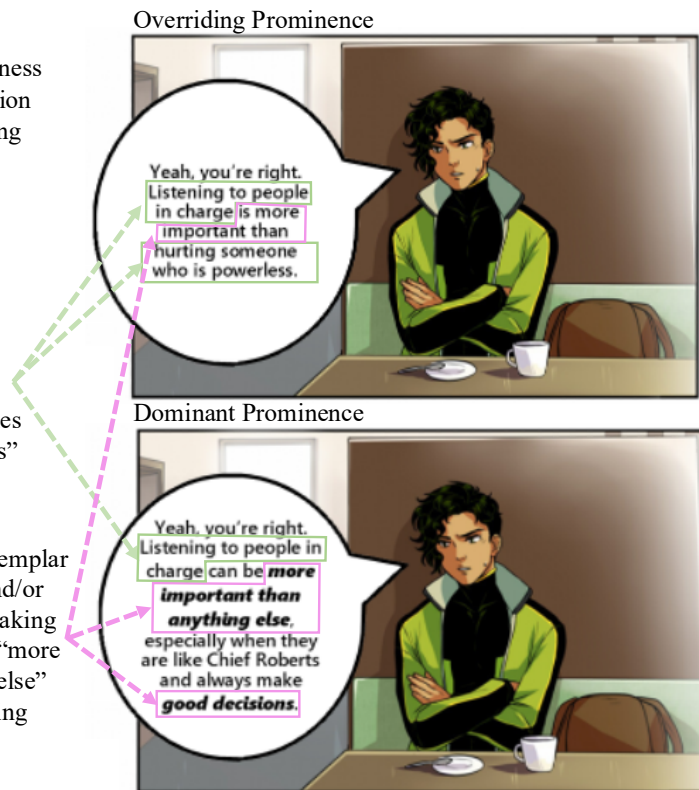
Refers to the presence of intuitions in content rather than audience members' minds.

- **Intuition Exemplar**

Refers to narrative cues that share primary features in common with a moral intuition: e.g., "Listening to people in charge" exemplifies authority. "Hurting someone who is powerless" exemplifies care.

- **Prominence**

Refers to the conspicuousness of a intuition exemplar by increasing its concreteness, emotionality, and/or having it frequently/recently portrayed: e.g., making text bold/italicized or not varies concreteness; "more important" vs. "more important than anything else" varies emotionality; presence/absence of "hurting someone who is powerless" varies frequency.



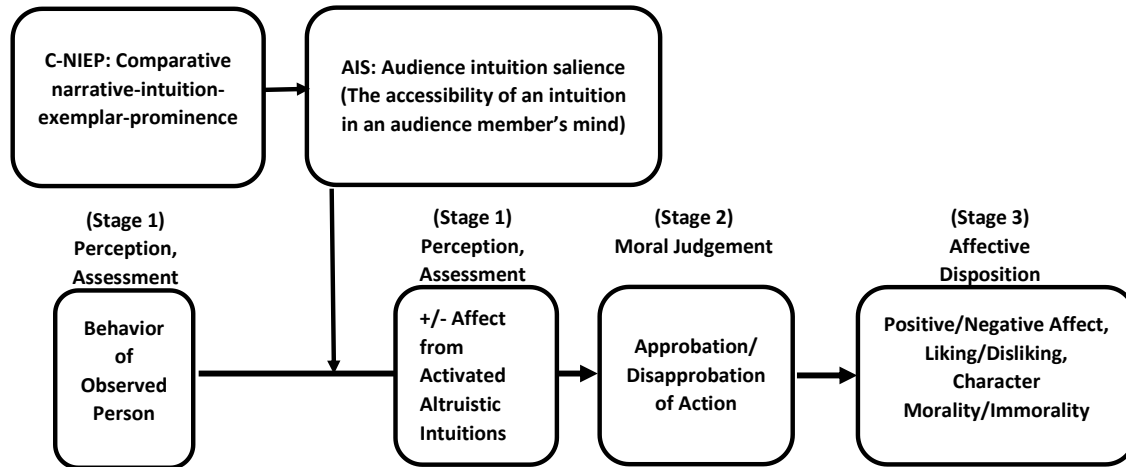
*Note.* C-NIEP is conceptually defined as the relative conspicuousness of exemplars representing different intuitions within a narrative. As such, intuition exemplars for the most prominent (i.e., superordinate) domain may be made more conspicuous compared to the intuition exemplars for other less prominent (i.e., subordinate) domains. Operationally, the comparative prominence can vary by making intuition exemplars for one domain more or less concrete, emotional, or frequently or recently presented relative to exemplars representing other domains. Different levels of comparative prominence can be labeled dominant (i.e., so prominent that it makes cues related to other intuitions inconspicuous) or overriding (so conspicuous that it marginalizes the conspicuousness of cues related to other intuitions).

The MADM suggests that as C-NIEP increases emphasis on a superordinate intuition, the salience (i.e., accessibility) of the superordinate intuition should also increase (compared to the subordinate intuition), thus increasing the strength of this intuition's biasing effect on character appraisal. While prior research supports some of the processes outlined in this statement; not all parts have been examined.

For example, research examining persistent differences in intuition salience suggests that trait accessibility (Graham et al., 2009; Prabhu et al., 2020) and C-NIEP (Tamborini et al., 2019; Tamborini, Baldwin et al. 2020) can influence the salience of the superordinate intuitions, and that trait accessibility can moderate the influence of behavior on approval of character behavior (Eden & Tamborini, 2017). However, no research examines the ability of C-NIEP to moderate the path from character behavior to approbation through C-NIEP's temporary influence on audience intuition salience. The current study does this by testing a model where C-NIEP alters audience intuition salience which, in turn, moderates the effect of character behavior on approbation and subsequent processes (see Figure 4). Importantly, the model in Figure 4 shows that affect from activated intuitions mediates the effect of behavior on approbation. However, the current inquiry examines the ability of audience intuition salience to moderate the effect of character behavior on approbation directly, without observing the influence of affect. The effect of affect is presumed in this investigation.

**Figure 4**

*C-NIEP Influence on MADM's Addition to Stages 1 to 3 of Zillmann's ADT Model*



*Note.* C-NIEP can strengthen/weaken audience intuition salience (the degree to which altruistic intuitions upheld or violated stand out in the minds of audience members) to alter the positive/negative affect associated with upholding/violating intuitions high on audience intuition salience on approval/disapproval of behavior. This is followed by the formation of character dispositions (e.g., like/dislike).

### **The Moderating Impact of Attention on Disposition Formation**

While many early theories in media effects suggest that attention is a prerequisite for a message to influence audiences (e.g., Klapper, 1960), little work has been done to examine the influence of attention in ADT processes, including processes involving disposition formation.<sup>2</sup> The MADM's suggestion that audience intuition salience (AIS) moderates the path from character behavior to approbation of the act is based on logic suggesting that AIS's moderating effect results from the influence of AIS on attention (see also Tamborini, Grady et al., 2021 for discussion). According to this logic, AIS directs attention to narrative cues associated with salient intuitions, thus strengthening the influence of those cues (and the intuitions they exemplify) on approbation of the character's behavior. As such, the effect of audience intuition

salience on approbation of a character's behavior (as well as the effect of C-NIEP on approbation) is through attention.

While the MADM does not specify a definition of attention, this investigation builds on other work to define attention in simple terms as the dedication of mental resources to a particular stimulus at the expense of regard to other competing stimuli. Chun et al. (2011) proffer that attention is a multifaceted concept that involves multiple decentralized perceptual and mental systems that are used to select and process information in one's environment (external attention) and memory (internal attention). They argue that attention is driven and manifested by the mind's limited capacity to perceive and encode all the information present in one's immediate environment or memory.

In describing the concept, Chun et al. characterized attention in terms of three different mechanisms driven by the mind's limited capacity: selection, modulation, and vigilance. Selection refers to the act of dedicating limited processing capacity to one internal or external item (e.g., some memory or a stimulus in one's immediate environment) among other competing items. Modulation is the extent to which a person immediately allocates resources to process and encode the selected stimulus or memory accurately. Finally, vigilance denotes the sustaining of cognitive resource allocation to the selected item over an extended period after initial modulation. In each case, the goal of these mechanisms is to bias attention (i.e., the dedication of cognitive resources) toward a specific item. This resource bias is the central function of attention. Among narrative audience members, attention can be thought of as the biased dedication of cognitive resources to story cues.

This conception of attention coincides with the MADM, wherein, the accessibility of an intuition in the minds of audiences is said to drive an increase in attention towards information

related to that intuition. As such, attention to intuition-related cues in the narrative, especially cues tied to a character's upholding or violating of that intuition, are proffered to strengthen the effect of behavior upholding or violating that intuition on disposition formation. Moreover, as C-NIEP is thought to directly increase audience intuition salience, MADM-based logic suggests that audience intuition salience mediates the effect of C-NIEP on attention, which, in turn, moderates the influence of behavior on character appraisal. Specifically, the prominence of the superordinate intuition should make that intuition more accessible in the minds of audiences (compared to other intuitions), biasing attention toward narrative cues exemplifying its superordinate status. As a result, audiences should evaluate behaviors based on whether they uphold or violate the superordinate intuition (and no others).

Existing research suggests that attention is interconnected with moral judgment and decision-making (see Fiedler & Glöckner, 2015; Gantman & Van Bavel, 2015 for review), but little work has been done in this area. For example, initial research on the moral pop-out effect suggests that narratives making moral needs salient can prompt audiences to attend to morally latent cues (Gantman & Van Bavel, 2016). This work demonstrated that reading a narrative about an unjust act (as opposed to a just act) increased an individual's ability to perceive moral words at a preconscious level during a lexical decision task.

Other research has demonstrated that the timing of attention given to a moral choice can shape moral judgment. For instance, Pärnamets et al. (2015) asked participants to evaluate whether different acts were moral or immoral. After introducing each act, participants were presented with a screen image showing "sometimes justifiable" or "never justifiable" on different sides of the monitor. Study findings demonstrated that a participant's moral choice could be manipulated by asking them to make their decision immediately after their gaze had lingered on

one option or the other. While these studies are informative, they do not examine whether audiences will attend to distinct intuition-related cues when multiple intuitions are made comparatively prominent in a narrative. Nor do they examine whether prominence can affect moral approbation through its influence on attention.

Some indication that intuition prominence can affect attention can be seen in a recent study examining the effect of prominence on moral decision-making. Tamborini, Baldwin et al. (2020) observed that the variation in C-NIEP can alter attention to subsequent cues related to the superordinate intuition. Specifically, their findings showed that when the superordinate intuition was made more prominent in the story, audience members gave more attention to background cues related to that intuition.

Other findings from this study showed also that C-NIEP could influence moral approbation through its influence on audience intuition salience. However, their study did not examine the influence of audience intuition salience on attention or attention's influence on approbation. As such, no research to date has examined whether audience intuition salience mediates C-NIEP's influence on attention or attention's ability to moderate the influence of a character's behavior on approbation and subsequent ADT processes. In the current study, an experiment measures gaze fixations toward a priori cues in a narrative that represent the superordinate intuition and examines the relationship of these fixations to variations in C-NIEP, AIS, behavior, and behavior approbation.

## **INTUITIVE AND DELIBERATIVE MECHANISMS THAT GOVERN DISPOSITION FORMATION**

Part 2 of this investigation examines the speed with which judgments of characters and behaviors are formed to test MADM-based logic proffering the use of intuitive and deliberative mechanisms in the evaluation of different narrative types. The MADM borrows from the narrative enjoyment and appreciation rationale (NEAR; Lewis et al., 2014; Tamborini, Grady et al., 2021) to describe the underlying mechanisms that govern character appraisals resulting from narrative cues that vary the degree of audience intuition salience and attention to intuition-related cues. The NEAR suggests that when a superordinate intuition (i.e., one more salient than all others) is made dominantly salient (i.e., one so accessible in cognition that it precludes attention to other intuitions), its dominance prompts automatic processing, which leads to fast appraisals based solely on favor towards upholding dominant intuitions.

The automatic processing and fast appraisal described by the NEAR results from the fact that, by definition, no other intuitions existing in the narrative are salient enough to compete with a dominant intuition for the receiver's attention. Absent attention to any other intuition, response to the upholding of the dominant intuition becomes reflexive and fast. By comparison, when other intuitions are not only salient enough to at least compete with the superordinate intuition for attention but are also in conflict with that intuition, response to the upholding of the superordinate intuition becomes comparatively more deliberative and slower. When a superordinate intuition conflicts with another less salient intuition that competes for attention, the NEAR refers to this as overridingly salient. As such, when a dominantly salient intuition is upheld, audiences should appraise characters and stories more quickly and positively than when an overridingly salient intuition is upheld. The NEAR defines the appraisal of upholding a



dominantly salient intuition as enjoyment and the upholding of an overridingly salient intuition as appreciation.

Research shows support for the NEAR's predictions that the upholding of dominantly salient intuitions leads to faster and more positive evaluations of story endings that uphold that superordinate intuition (Lewis et al., 2014; Kryston, 2021; see also Grizzard et al., 2021).

However, no research to date has tested the NEAR's claim that the evaluation of characters who uphold dominantly salient intuitions (compared to overridingly salient intuitions) leads to faster and more positive evaluations of characters during the disposition formation stage.

The current study attempts to address this gap in research by examining the speed of disposition formation under conditions of dominant versus overriding salience created through C-NIEP. These conditions are referred to as *dominant C-NIEP* (so prominent that it makes cues related to other intuitions inconspicuous) and *overriding C-NIEP* (so conspicuous that it marginalizes the conspicuousness of cues related to other intuitions). The logic represented here is tested in the current study by measuring how quickly (i.e., response time) audiences rate a protagonist as moral or immoral when a superordinate intuition is made dominantly versus overridingly salient in narrative content.

## THE PRESENT INVESTIGATION

The present investigation builds on existing literature. Previous research suggests that C-NIEP level (dominant vs. overriding) shapes the audience's salience of and attention to superordinate intuitions in narratives, such that dominant C-NIEP prompts an increase in the AIS of and attention to superordinate intuitions (Tamborini, Baldwin et al., 2020). Research also shows that whether a narrative character's behavior upholds or violates a moral intuition effects the behavior's approbation. Behaviors that uphold a moral intuition are sanctioned while those that violate moral intuitions are condemned (e.g., Eden & Tamborini, 2017).

Logic underlying the MADM suggests that the AIS of and attention to superordinate intuitions can moderate two aspects of how character behavior upholding or violating that intuition (or the subordinate intuition) effects the behavior's approbation. These include (a) whether the behavior is sanctioned or condemned and (b) whether the judgment is made through intuitive or deliberative processes. Specifically, regarding the former, MADM base-logic suggests that an increase in the AIS of superordinate intuitions and/or attention to such intuitions will increase the sanctioning of behavior that upholds superordinate intuitions and decrease the condemnation of their violation. The opposite effect is predicted for subordinate intuitions. This is the focus of Part 1 in this investigation, which examines the ability of these two factors (the AIS of a superordinate intuition and/or attention to cues exemplifying that intuition) to moderate the effect of a behavior's inherent morality (i.e., upholding versus violating a superordinate intuition) on the approbation of that behavior.

Regarding the latter, MADM base-logic suggests that intuitive processes govern judgments of behaviors that uphold or violate intuitions made dominantly prominent by C-NIEP, whereas deliberative processes govern judgments of behaviors that uphold or violate intuitions

made overridingly prominent by C-NIEP. As such, judgments of behaviors made dominantly prominent will be faster than those of behaviors made overridingly prominent. This is the focus of Part 2 in this investigation, which examines the speed of disposition formation for behaviors that uphold/violate intuitions made dominantly versus overridingly prominent.

The logic underlying Part 1 of the investigation provides the foundation for a set of eight hypotheses represented together as the model shown in Figure 5. This model is tested in two experimental studies. Study 1 separately tests a critical path in the predicted model, the ability of C-NIEP to increase the audience intuition salience of intuitions made more prominent. This separate test was conducted because the experimental design for Study 2 could not rule out research progression threats that might have biased tests of this effect. Due to protocol restraints, audience intuition salience was measured after manipulations of both C-NIEP and protagonist behavior that either upheld or violated intuitions made prominent by C-NIEP. Research suggests that upholding or violating an intuition can make that intuition salient in the minds of audience members (e.g., Eden et al., 2014). Study 1 was conducted to ensure that our C-NIEP manipulation successfully influences audience intuition salience in isolation.

Study 2 offers tests for all paths in the predicted model shown in Figure 5. In general terms, the top part of the model represents MADM's description of how audience intuition salience (AIS) mediates the effect of that intuition's prominence in content (C-NIEP) on attention to related narrative cues. The bottom part of the model represents ADT's description of disposition formation processes. Finally, the paths leading from the top part to the bottom part of the model represent the ability of both AIS and attention to moderate the disposition formation process.

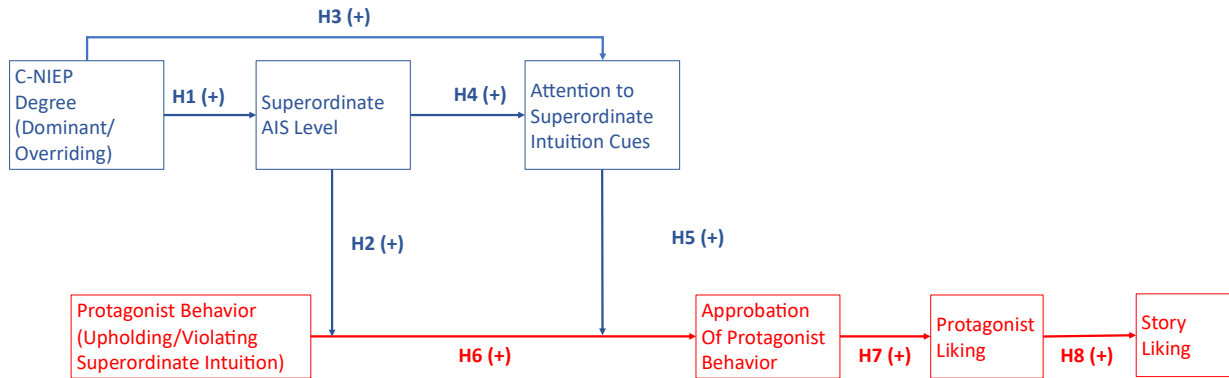
In more detailed terms, the top part of the model is represented in three paths. The path labeled H1 represents the effect of C-NIEP degree on superordinate AIS level. H4 represents the effect of superordinate AIS level on attention to superordinate intuition cues, and H3 represents the direct effect of C-NIEP level on attention to superordinate intuition cues. In H1, dominant (compared to overriding) C-NIEP predicts increased superordinate AIS. Likewise, in H4, C-NIEP predicts increased attention to superordinate intuition cues. Note here that the model shows that C-NIEP level is predicted to effect attention to superordinate intuition cues both directly and indirectly through its effect on superordinate AIS.

The bottom part of the model outlines classic ADT processes in three paths. Here, protagonist behavior upholding (versus violating) the superordinate intuition increases moral approbation (H6), which subsequently increases character (H7) and story liking (H8). The path labeled H6 represents the effect of protagonist behavior (upholding violating the superordinate intuition) on approbation of protagonist behavior. H7 represents the effect of approbation of protagonist behavior on protagonist liking, and H8 represents the effect of protagonist liking on story liking. Here, protagonist behavior upholding (compared to violating) superordinate intuitions increases approbation of protagonist behavior (H6), which increases protagonist liking (H7), which increases story liking (H8).

The two paths from the top to the bottom part of the model (H2 and H5) represent the moderation of ADT described by the MADM. In H2, increased superordinate AIS strengthens the positive influence of behavior upholding superordinate intuitions on approbation of behavior. Similarly, in H5, increased attention to superordinate intuition cues strengthens this same positive influence.

**Figure 5**

*Predicted Model*



*Note.* The predicted model describes Hypotheses 1 through 8. Red variables and paths represent previously examined relationships in ADT research. The blue variables and paths represent the additional relationships and moderations predicted by the MADM.

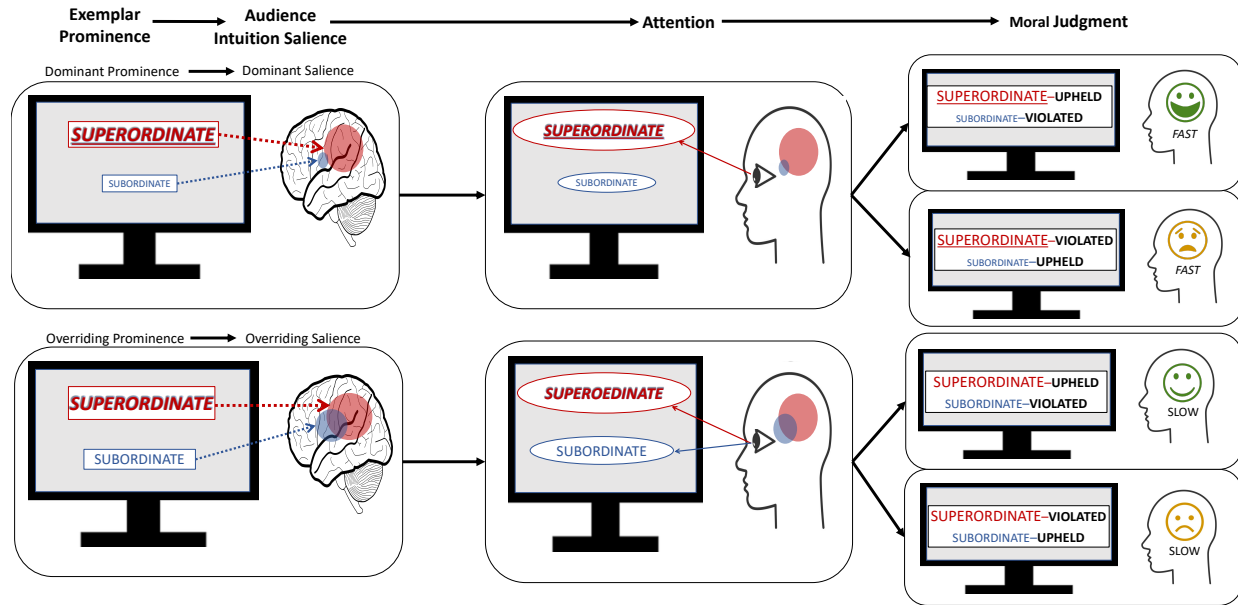
Part 2 of this investigation involves testing C-NIEP’s influence on intuitive and deliberative mechanisms during disposition formation. This is tested by comparing the speed with which audiences rate both a character’s morality and their liking of the character when (a) the superordinate intuition is made dominantly versus overridingly prominent in the narrative and (b) the character upholds versus violates the superordinate intuition. It is expected that when the superordinate intuition is dominantly prominent in the narrative, audiences will quickly appraise a character who upholds that intuition as both moral and likable and will quickly appraise a character who violates that intuition as both immoral and unlikable. By comparison, when the superordinate intuition is overridingly prominent in the narrative, audiences will be slower at evaluating a character’s morality and likability. Notably, the effect of character behavior upholding or violating the superordinate intuition on audience appraisal of the character as moral and likable will remain unchanged. Only the speed of appraisal will be affected.

This leads to H9: The degree of comparative-narrative intuition-exemplar prominence of the superordinate intuition (dominant versus overriding) will increase the speed of character

appraisals (i.e., character approbation and liking). Figure 6 provides a visualization of the processes examined by both the model tested in Part 1 and the speed of response times tested in Part 2 of this investigation.

**Figure 6**

*Visualization of Processes Represented in the Predicted Model and Associated Response Times*



*Note.* Figure 6 visualizes the moderation of Zillmann’s ADT model. Varying the comparative-narrative intuition exemplar prominence of two conflicting moral domains alters their comparative intuition salience in the minds of audience members. First, the dominant (vs. overriding) prominence of a superordinate intuition in content (e.g., respect for authority) increases the salience of that intuition in an audience member’s mind (potentially to levels of dominant or overriding salience). Second, the increased salience of that intuition will influence whether audiences pay attention principally to cues exemplifying a superordinate intuition or both to cues exemplifying superordinate and subordinate (e.g., care) intuitions. Third, greater salience and attention to superordinate intuition cues shape moral judgment. Audiences positively evaluate the upholding of a superordinate intuition (and negatively evaluate its violation) regardless of whether it is dominant or overriding. However, dominant (compared to overriding) salience should increase the speed and affective strength of this evaluation.

The narrative stimuli used to test both the predicted model (i.e., testing MADM’s suggestion that the AIS of and attention to superordinate intuitions can moderate the effect of character behavior on approbation) and Hypothesis 9 (testing C-NIEP’s influence on intuitive

and deliberative mechanisms during disposition formation) manipulated the prominence of the care and respect for authority intuitions from MFT (Haidt & Joseph, 2007). In all versions of the stimuli, C-NIEP was controlled to make the prominence of respect for authority superordinate over care, whose prominence was always made subordinate. The decision to always make one intuition superordinate (respect for authority in this case) was made for practical reasons. This investigation set out to examine the effects of C-NIEP degree (dominant or overriding) and behavior upholding/violating an intuition made superordinately prominent. Questions about whether making different intuitions would moderate these effects was not a goal of this investigation.

## STUDY 1

### Study 1 Methods

#### *Procedures*

Study 1 set out to examine the effect of C-NIEP on audience intuition salience prior to a character's decision to uphold or violate a moral intuition. This study consists of a single factor online experiment containing two conditions in which C-NIEP was manipulated to make the superordinate intuition, respect for authority, either dominantly or overridingly prominent over care. It was expected the accessibility of respect for authority will be higher for participants in the dominant condition than the overriding condition. Participants read a comic stimulus, wherein a protagonist is faced with the decision to either uphold authority at the cost of care or uphold care at the cost of violating authority. The stimulus used in both Study 1 and Study 2 was the same comic stimulus, up to the point the protagonist decides which intuition he will uphold. Whereas the stimulus comic used in Study 1 stops just before the protagonist decides whether to uphold authority and violate care or uphold care and violate authority, the stimulus comic in Study 2 continues.

As such, for Study 1, participants read one of two versions of the story's first half, which contained the C-NIEP manipulation. In the first half of the story, respect for authority was either made dominantly or overridingly prominent over care (see more detailed description below) prior to the protagonist making a decision of which intuition to uphold and violate. After exposure, participants responded to open-ended prompts using audio recordings designed to measure audience intuition salience (see below for more detail on the measure). These responses were coded for the presence of care and respect. This was used as one measure of audience intuition salience. Finally, the participants responded to the Character Moral Foundations



Questionnaire (Grizzard et al., 2020), which was used as a second measure of audience intuition salience. All procedures for Study 1 were approved by the university's internal review board.

### ***Sample***

An initial sample of 133 participants was recruited from undergraduate communication classes at a large midwestern university for the study. Three participants were excluded due to their participation in Study 2 beforehand or their failure to complete the study in full. This made the final sample  $n = 130$  ( $M_{\text{age}} = 20.05$ ,  $SD_{\text{age}} = 1.66$ , 58.46% female, 66.15% White, 7.69% African American, 7.69% Asian, 18.46% other ethnicities). Participants were randomly assigned to read either the dominantly ( $n = 71$ ) or overridingly prominent ( $n = 59$ ) version of the comic stimuli. Each participant was given course credit for their participation in the study.

### ***Stimuli***

The stimuli used in this experiment consisted of comic stories that experimentally manipulated the extent to which narrative exemplars (i.e., cues) emphasized respect for authority over care (i.e., dominant or overriding prominence). The comic stimuli were created by using illustrations from the online comic *Switch* (<https://tapas.io/series/Switch>), which was accompanied by dialogue and character names created specifically for this study.

The plot of the comic starts by introducing a moral dilemma encountered by the protagonist, a teenager superhero called Static. Readers learn that a supervillain antagonist called Pyre is using a person named The Runner to transport a stolen Aztec artifact. The story presents The Runner as vulnerable and sympathetic, since he is only delivering the artifact to protect his sick and hospitalized brother. Chief of police Roberts instructs Static to stop The Runner using any means necessary (including using harm). Static then has a conversation with his friend Max,

who advises him that obeying an authority's instructions is most important. The emphasis that Max places on the superordinate importance of respect for authority was varied by condition.

All comic stimuli in the two conditions had the same page length and similar word counts. To manipulate whether the narrative made respect for authority dominantly or overridingly prominent over care, dialog in the narrative was altered to vary the prevalence, concreteness, and emotionality of the cues that represented each intuition. As such, when the narrative made respect for authority dominantly prominent, cues representing respect for authority were most prevalent, emotional, and concrete. At the same time, mentions of care were rare and, when mentioned, were not emphasized. For example, in the dominantly prominent condition, Static's friend says, "You should *always follow* Chief Robert's instructions. He's a *smart guy*. People in town *look up to him*, and he will always *steer you right*." The friend's statement includes exemplars of respect for authority such as "You should *always follow* Chief Robert's instructions" and "He's a *smart guy*." Moreover, bolding and italicizing keywords in the text is a concrete means of increasing their emotional emphasis. Notably, the text makes no mention of care. By comparison, when the narrative made respect overridingly prominent, while respect-related cues were still emphasized the most, cues representing care were presented and emphasized to a greater degree than in the dominantly overriding condition. As such, in contrast to the first example, in the overridingly prominent condition, the friend says, "It might feel wrong to harm The Runner. But it would be much worse to disregard Chief Roberts. He's a smart guy. He wouldn't tell you to take out The Runner if there was any other way to stop Pyre." Here, while the friend's statement still includes exemplars of respect for authority such as "He's a smart guy," care is also exemplified (though to a lesser degree). Additionally, while care is exemplified by text such as "It might feel wrong to harm The Runner," it is actively subordinate

by text such as, “it would be much worse to disregard Chief Roberts.” Moreover, the emphasis on respect for authority is not made concrete and emotional with bolding or the italicizing of keywords. Copies of the comic stimuli’s first five pages as used in Study 1 can be found in the OSF repository ([https://osf.io/u8fzd/?view\\_only=d41b060c16c44524af50e9fd7216a25b](https://osf.io/u8fzd/?view_only=d41b060c16c44524af50e9fd7216a25b)) and Appendix A (see pages 1 through 5).

### *Measures*

After reading the comic, participants were asked to describe the story out loud and in their own words. Participants’ verbal responses were recorded using their computer microphones and coded for the presence of care and respect for authority. First, participants described what the protagonist and other characters did in the story.<sup>3</sup> Following this, they described why the protagonist did the things he did. Finally, they answered whether the protagonist did the right thing or not and why they believed this is the case. Audio recordings were transcribed using Google’s Text to Speech API and individually inspected for accuracy.

Participants’ open-ended responses were coded for the presence of care and respect for authority (along with the other moral intuitions) using a well-established MIME-based coding scheme (e.g., Hahn et al., 2017; 2019; Tamborini et al., 2017). Importantly, this scheme instructs coders to identify a character’s motivations and whether those motivations share defining features with two intuitions of interest (care and respect for authority). Relevant here, the codebook defines care as “An entity responding to another in need” and respect for authority as “An entity responding to a benevolent/good authority figure.” Coding was completed by two undergraduate coders trained over multiple weeks, through in-person meetings and homework assignments, to identify the presence of intuitions and whether the coded intuitions were upheld or violated. After data collection, these coders independently identified whether an intuition was

present in each of the three prompted open-ended responses across the entire sample. Intercoder reliability was calculated for a subsample of 50 of the 499 open-ended answers. For respect, percent agreement = 80% (*Krippendorff's*  $\alpha = .42$ ; *Gwet*  $AC_1 = .70$ ). For care, percent agreement = 68% (*Krippendorff's*  $\alpha = .07$ ; *Gwet*  $AC_1 = .61$ ). Coder disagreements were resolved by the researcher, who has also been trained in this coding scheme.

Following a procedure successfully used by Tamborini, Lewis et al. (2016), coder scores were used to create a measure of audience intuition salience, referred to as the coded-AIS score. Notably, participant descriptions of the story, the character behaviors, and the motivations for those behaviors were given without prompting participants to think about care or respect for authority. Under the assumption that unprompted mentions of care and respect indicate the accessibility of these intuitions in the minds of our participants, the number of times each intuition was mentioned across the three open-ended responses was averaged to form a measure used to indicate audience intuition salience.

In addition to the open-ended responses, a modified version of the Extended Character Moral Foundations Questionnaire (Grizzard et al., 2020) was used to measure the extent to which participants perceive the protagonist as caring and respectful towards authority ( $M_{\text{care}} = 5.07$ ,  $SD_{\text{care}} = 1.25$ , *Cronbach's*  $\alpha_{\text{care}} = .801$ ;  $M_{\text{respect}} = 5.48$ ,  $SD_{\text{respect}} = 1.29$ ,  $\alpha_{\text{respect}} = .814$ ).<sup>4</sup> This measure, referred to as the character-MFQ score, was used as an additional indicator of audience intuition salience. For Study 1, there is logic for using this measure as an indicator of AIS. In line with research by Tamborini, Baldwin et al. (2020), “The decision to adopt this as an indicator of audience intuition salience was based on consideration that: (a) the character’s behavior was consistent across [both] conditions... and (b) the only difference across conditions was the amount of emphasis placed on the two intuitions. As such, differences in this measure should

represent the effect of narrative emphasis on the salience of these intuitions in respondents” (p. 16). According to the authors, higher participants’ scores of “the protagonist (despite consistent character behavior across conditions) is taken to indicate increased salience of the intuition due to condition emphasis” (p. 16).

### **Study 1 Results**

Two independent sample t-tests were conducted to examine differences in the salience of care and respect for authority measured by the coded-AIS scores for respect and care. The first t-test showed that participants in the dominantly prominent condition mentioned respect for authority ( $M = .39$ ,  $SD = .36$ ) more than those in the overridingly prominent condition ( $M = .30$ ,  $SD = .36$ ). While AIS for respect was in the expected direction, this difference was not significant,  $t(112) = -1.355$ ,  $p = .178$ , *Cohen’s d* =  $-.254$ . By comparison, the second t-test revealed that participants in the overridingly prominent condition mentioned care ( $M = .38$ ,  $SD = .32$ ) significantly more than those in the dominantly prominent condition ( $M = .27$ ,  $SD = .28$ ),  $t(112) = 2.038$ ,  $p = .044$ , *Cohen’s d* =  $.382$ . This effect was also in the expected direction.<sup>5</sup>

Two additional independent sample t-tests were conducted to examine differences in character-MFQ scores between C-NIEP conditions. Significant differences were observed on MFQ scores representing participants’ perceptions that the protagonist was caring,  $t(126) = -2.448$ ,  $p = .016$ , *Cohen’s d* =  $-.432$  and that the protagonist had respect for authority,  $t(126) = -4.431$ ,  $p < .001$ , *Cohen’s d* =  $-.787$ . In line with expectations, participants thought the protagonist was more respectful in the dominantly prominent condition ( $M = 5.73$ ,  $SD = 1.03$ ) than in the overridingly prominent condition ( $M = 5.18$ ,  $SD = 1.50$ ). Additionally, participants thought the protagonist was more caring in the dominantly prominent condition ( $M = 5.49$ ,  $SD = 1.11$ ) than in the overridingly prominent condition ( $M = 4.57$ ,  $SD = 1.23$ ).

Since our stimuli emphasized the upholding of respect for authority over the violation of care, together, these results suggest that the C-NIEP manipulation made respect for authority more salient and care less salient when the superordinate intuition was made more (dominantly) prominent. However, since significant differences across conditions were only observed for only one measure of authority compared to both measures of care, these results also suggest that the prominence of the subordinated intuition care was more successfully manipulated than the superordinate intuition respect.

### **Study 1 Discussion**

The findings of Study 1 are largely in line with expectations. Manipulating the C-NIEP degree (dominant vs. overridingly prominence) shaped audience intuition salience. Specifically, making the superordinate intuition (respect for authority) dominantly prominent (as opposed to overridingly prominent), increased the salience of the superordinate intuition and decrease the salience of the subordinated intuition (care) in audience members' minds. Thus, Study 1 provides evidence that C-NIEP can make an intuition temporarily more accessible. Notably, the results of Study 1 also suggest that the prominence of the subordinated intuition (care) was more successfully manipulated than the superordinate intuition (respect). A more detailed review of this observation can be found in the general discussion.

While providing useful information, Study 1 did not test whether audience intuition salience can strengthen or weaken the effect of a character's behavior on approbation and subsequent disposition formation. Additionally, Study 1 did not test whether C-NIEP can influence the intuitive and deliberative mechanisms governing disposition formation. Study 2 was conducted to examine these issues.

## STUDY 2

### Study 2 Methods

Study 2 consists of a 2 x 2 fixed-factor experimental design that varies the degree of a superordinate intuition's C-NIEP (dominantly versus overridingly prominence) and the which of two intuitions is upheld at the cost of violating the other (care over respect for authority versus respect for authority over care). The first factor (degree of a superordinate intuition's C-NIEP) was varied to directly test the effect of C-NIEP on AIS (H1) and attention (H3). This factor was also varied (1) to examine C-NIEP degree's indirect effect on attention through its effect on AIS (H1 and H4) and (2) to examine whether C-NIEP can moderate protagonist behavior's effect on approbation through C-NIEP's direct influence on AIS (H2) and indirect influence on attention (H5). The second factor (which intuition is upheld or violated) was varied to test the MADM's prediction that AIS and attention moderate the influence of observed behavior on approbation of actions.

### *Procedures*

In Study 2, participants were randomly assigned to see one of four versions of a comic video. In all four versions, C-NIEP is varied to make the prominence of respect of the authority intuition superordinate to the subordinated care intuition. A 2 X 2 design varies C-NIEP type (dominant [ $n = 82$ ] vs. overriding [ $n = 88$ ] prominence) by character behavior (upholding [ $n = 89$ ] vs. violating [ $n = 81$ ] the superordinate intuition).

Participants came to a lab and were seated at a computer station with an eye-tracking camera, and the camera was calibrated. Next, they got acquainted with a reaction-time protocol by completing a practice round. Participants then read a version of the same comic stimulus used in Study 1. However, unlike Study 1, participants in Study 2 read the entire comic stimuli which,

in addition to the C-NIEP manipulation, varied whether the protagonist either upheld authority at the cost of violating care or upheld care at the cost of authority.

Afterward, participants completed three sets of measures. In the first set, participants rated the protagonist's morality and likability using the reaction-time protocol. Next, participants described the story by responding to open-ended questions. Responses were audio-recorded with a Jabra Evolve 80 noise-canceling headset. Finally, participants completed a questionnaire that included items measuring story liking, along with items measuring demographic characteristics and checking for procedural problems during the study. All procedures for this study were approved by the university's internal review board.

### ***Sample***

Participants were recruited from undergraduate communication classes at the same a large midwestern university. Power analysis revealed that a path model with 10 manifest variables,  $1 - \beta = .80$ ,  $\alpha = .05$ ,  $df = 29$ , and  $RMSEA = .08$  required a sample of 132 participants (Moshagen & Erdfelder, 2016). With this in mind, A sample of 172 participants completed the study. Two participants were excluded due to technical malfunction or previous participation in Study 1. Thus, 170 participants were in the final sample ( $M_{age} = 20.43$ ,  $SD_{age} = 1.17$ ; 55.88% female; 71.18% White, 10.59% African American, 8.24% Asian, 10% other ethnicities).

Participants were given course credit for their participation.

### ***Stimuli***

The stimuli used in Study 2 was a comic video. The first part of the video was exactly the same as the comic video used in Study 1, where the story was manipulated to vary whether respect for authority was made dominantly or overridingly prominent over care. The second part of the video continued the story by manipulating whether the protagonist violated authority (the



superordinate intuition) in order to uphold care (the subordinate intuition) or violated care in order to uphold authority.

To manipulate the protagonist's behavior, during the climax of the story, Static is forced to choose which of the two intuitions to uphold and to violate. In one condition, the Static follows the Police Chief's instructions to retrieve the stolen artifact (thus upholding authority) by causing harm to the vulnerable perpetrator (thus violating care). In the other condition, the protagonist refuses to follow the Police Chief's instructions (thus violating authority) by letting the vulnerable perpetrator escape to help his sick brother (thus upholding care). Copies of the comic stimuli can be found in the OSF repository ([https://osf.io/u8fzd/?view\\_only=d41b060c16c44524af50e9fd7216a25b](https://osf.io/u8fzd/?view_only=d41b060c16c44524af50e9fd7216a25b)) and Appendix A.

### ***Measures***

The self-report measures that were used for this study can be found in Appendix B.

**Eye Tracking.** Participants' attention to cues related to the superordinate intuition (respect for authority) and subordinate intuition (care) were measured by eye gaze toward visual information identified a priori as related to each intuition of interest. Eye gaze was captured using the Smart Eye Aurora eye-tracking camera and Imotions software. The eye-tracking camera had a sampling rate of 60 Hz. At a specific point in the story, which comes after manipulating respect for authority's prominence and during the protagonist's decision, participants were presented a comic panel showing Static making a dramatic statement while standing a front of a graffiti wall for ten seconds (see "Page 8" in [https://osf.io/u8fzd/?view\\_only=d41b060c16c44524af50e9fd7216a25b](https://osf.io/u8fzd/?view_only=d41b060c16c44524af50e9fd7216a25b)). The wall contained words and phrases related to both respecting authority (i.e., the words "Respect your Leaders") and care (i.e., the word "Kindness"), along with several unrelated distractor words and phrases.

None of the words on this wall appear anywhere else in the comic. In line with previous research (e.g., Li et al., 2016; Perego et al., 2010), eye fixations, or collections of proximal gaze points focused on an object (Cummins, 2017), were used as indicators of attention. Specifically, Imotions was used to mark the words “Respect your Leaders” and “Kindness” as two separate areas of interest, and an I-VT fixation filter was applied to calculate the presence of fixations (with a minimum fixation of 60 ms). From this, the number of fixations and the total fixation duration in each area of interest served as the attention variables.<sup>6</sup>

**Audience Intuition Salience.** AIS was gauged with the same measures used in Study 1. After reading the comic, participants were asked to describe the story out loud and in their own words. Participants’ verbal responses were recorded with Jabra Evolve 80 noise-canceling headset. Audio recordings were again transcribed using Google’s Text to Speech API and individually inspected for accuracy.

Participants’ open-ended responses were then coded for the presence of care and respect for authority (along with the other moral intuitions) using the same MIME-based coding scheme and procedure used in Study 1 (e.g., Hahn et al., 2017; 2019; Tamborini et al., 2017). Intercoder reliability was calculated for a subsample of 80 of the 791 open-ended answers. For respect, percent agreement = 82.5% (*Krippendorff’s*  $\alpha = .52$ ; *Gwet*  $AC_1 = .79$ ). For care, percent agreement = 72.5% (*Krippendorff’s*  $\alpha = .50$ ; *Gwet*  $AC_1 = .62$ ). Coder disagreements were again resolved by the researcher.

In addition to the open-ended responses, the Extended Character Moral Foundations Questionnaire (Grizzard et al., 2020) was used to measure the extent to which participants perceive the protagonist as caring and respectful towards authority ( $M_{\text{care}} = 5.31$ ,  $SD_{\text{care}} = 1.25$ ,

$\alpha_{\text{care}} = .801$ ;  $M_{\text{respect}} = 5.22$ ,  $SD_{\text{respect}} = 1.39$ ,  $\alpha_{\text{respect}} = .815$ ). This measure was again used as a secondary indicator of audience intuition salience.

**Behavior Approbation and Character Liking.** Both behavior approbation and character liking were measured with two different methods: a reaction-time task and a questionnaire. Behavior approbation and character liking were measured with a reaction-time task in which participants responded to two different incomplete statements. To account for the extremely fast and slow reaction times, latency was capped at a minimum of 200 milliseconds and a maximum of 3 standard deviations above the mean scores (Whelan, 2008). The first incomplete statement represented the participant's judgment of the morality of the character's behavior. The second incomplete statement represented the character's appeal to the participant. Participants were asked to respond twice to each statement on different bipolar-option pairs taken from Tamborini, Grady et al. (2020). Each response was obtained using different response options.

In the reaction time tasks, a symbol containing three asterisks (\*\*\*) was briefly presented for 700 milliseconds in the center of the screen. When the asterisks disappeared, they were replaced by a statement that can be completed in one of two ways. Two choices for completing the sentence appeared on the left and right sides of the screen 1,000 ms after the statement appeared. The participant's task was to choose the best answer. Agreement for the choice on the right was indicated by pressing the right arrow key, whereas, agreement for the choice on the left was indicated by pressing the left arrow key. The statement used for measuring behavior approbation read as follows: "Static's decision about the Runner was [blank]." The two bipolar-option pairs for this statement were *moral-immoral* and *right-wrong* (coded as -1 and +1;  $M_{\text{choice}} = 0.772$ ,  $SD_{\text{choice}} = 0.516$ ;  $M_{\text{latency}} = 1,892$  ms,  $SD_{\text{latency}} = 859$  ms, *Skewness* = 1.30). The

statement used for measuring character liking read as follows: “Static is somebody I would [blank].” The two bipolar-option pairs for this statement were *like-dislike* and *root for-root against* ( $M_{\text{choice}} = 0.817$ ,  $SD_{\text{choice}} = 0.515$ ;  $M_{\text{latency}} = 1,364$  ms,  $SD_{\text{latency}} = 523$  ms, *Skewness* = 1.49). All bipolar-options were counterbalanced.

In addition to the reaction time measures, behavior approbation and character liking also were measured with a questionnaire. The questionnaire contained four items measuring character liking and one item measuring moral approbation. The character liking items came from Tamborini et al. (2018). They included questions such as “I would want to be friends with someone like Static.” All items were measured on a 7-point Likert-scale from *strongly disagree* (-3) to *strongly agree* (+3) ( $M = 1.12$ ,  $SD = 1.25$ ,  $\alpha = .920$ ). The single item measuring behavior approbation asked “To what extent were Static’s actions in the story the right thing to do?” Participants responded on a 7-point scale from *completely right* (-3) to *completely wrong* (+3) ( $M = 1.49$ ,  $SD = 1.31$ ).

**Story Liking.** Indicators of story appeal included both a single-item measure asking participants to respond to the statement “I like this comic” ( $M = 4.55$ ,  $SD = 1.50$ ), and a six-item measure from Oliver and Bartsch (2010) measuring story enjoyment and appreciation (e.g., “The comic was entertaining,” “I was moved by this comic”). Once again, all items were measured on a 7-point Likert-scale from *strongly disagree* to *strongly agree* ( $M_{\text{enjoyment}} = 4.49$ ,  $SD_{\text{enjoyment}} = 1.40$ ,  $\alpha_{\text{enjoyment}} = .937$ ;  $M_{\text{appreciation}} = 3.81$ ,  $SD_{\text{appreciation}} = 1.34$ ,  $\alpha_{\text{appreciation}} = .880$ ).

**Additional Questions.** The final measure of the study was a questionnaire containing 17 items. Five items were used to check participants’ attention to the story. Four items measured the respondent’s previous participation in related studies. Four items checked for procedural problems. Finally, four items measured demographic characteristics of the participant.

## Study 2 Results

Examination of the findings from Study 2 began with an inspection of descriptive statistics for all variables (see Table 2). As can be seen in Table 2, these data show several things. First, across all experimental conditions, C-MFQ ratings of the protagonist’s morality were generally high (on a 1 to 7 scale) for both care ( $M = 5.31$ ,  $SD = 1.25$ ) and respect for authority ( $M = 5.22$ ,  $SD = 1.39$ ). Similar positive ratings were observed for story liking ( $M = 4.55$ ,  $SD = 1.50$ ), enjoyment ( $M = 4.49$ ,  $SD = 1.40$ ), and appreciation ( $M = 3.81$ ,  $SD = 1.34$ ), all too measure on a scale from 1 (low) to 7 (high). Although using a different scale (from -3 to +3) generally high ratings were also observed for approbation of the protagonist’s behavior ( $M = 1.49$ ,  $SD = 1.31$ ) and character liking ( $M = 1.12$ ,  $SD = 1.25$ ).

**Table 2**

*Descriptive Statistics of Variables used in Study 2*

<b>Variables</b>	<b>Scale</b>	<b><i>M</i></b>	<b><i>SD</i></b>	<b><i>N</i></b>
Respect AIS (coded response)	0 to 1	0.40	.28	146
Care AIS (coded response)	0 to 1	0.49	.33	146
C-MFQ for Respect for Authority	1 to 7	5.22	1.39	169
C-MFQ for Care	1 to 7	5.31	1.25	169
Total Fixation Time to “Respect your Leaders” (ms)	-	989.80	574.59	116
Fixation Count to “Respect your Leaders”	-	3.46	2.10	116
Total Fixation Time to “Kindness” (ms)	-	250.26	328.30	116
Fixation Count to “Kindness”	-	1.01	1.12	116
Approbation (scale)	-3 to +3	1.49	1.31	169
Character Liking (scale)	-3 to +3	1.12	1.25	169
Story Liking (scale)	1 to 7	4.55	1.50	170
Story Enjoyment	1 to 7	4.49	1.40	170
Story Appreciation	1 to 7	3.81	1.34	170
Approbation (RT task: choice)	-1 to 1	0.77	.52	158
Approbation (RT task: ms)	-	1,891.58	858.92	158
Character Liking (RT task: choice)	-1 to 1	0.82	.52	158
Character Liking (RT task: ms)	-	1,364.44	522.58	158

Additional analyses were also conducted on mean patterns tied to the study's 2 (C-NIEP: dominant/ overriding) x 2 (behavior: upholding/violating) design for outcome variables not included in hypotheses. These descriptive findings are reported in Appendix D.

### ***C-NIEP's Effect on AIS***

Following inspection of the descriptive statistics, analyses turned to consideration of the eight hypotheses presented in the predicted model tested in Part 1 of this study. H1 predicted that the degree of C-NIEP (i.e., whether the superordinate intuition is made dominantly versus overridingly prominent over a subordinated intuition) will increase the salience of the superordinate intuition and decrease the salience of the subordinated intuition in the minds of participants. To test H1, a series of four 2 (C-NIEP: dominant vs. overriding prominence) x 2 (character behavior: upholding vs. violating) ANOVAs were performed on two measures (each) gauging respect for authority and care audience intuition salience. The two measures were the coded-AIS scores and the character-MFQ scores assessing respect AIS and care AIS.

In the first ANOVA, the main effect of C-NIEP on the coded respect-AIS scores was not significant,  $F(1, 142) = 0.007, p = .931, \eta_p^2 < .001$ . By contrast, the main effect of the protagonist behavior on respect-AIS was significant,  $F(1, 142) = 5.305, p = .023, \eta_p^2 = .036$ . Inspection of means revealed that respect was more salient ( $M = .44, SE = .04$ ) when the protagonist upheld authority compared to when the protagonist violated authority ( $M = .33, SE = .03$ ). The interaction effect was insignificant,  $F(1, 142) = 2.290, p = .132, \eta_p^2 = .016$ .

In the second ANOVA, the main effect of C-NIEP on the coded-AIS score for care was significant,  $F(1, 142) = 8.381, p = .004, \eta_p^2 = .056$ . Examination of means revealed that, as expected, care was more salient when respect was overridingly prominent over care in the story ( $M = .57, SE = .03$ ) as opposed to when respect was dominantly prominent ( $M = .44, SE =$

.03). Similarly, a main effect of the protagonist's behavior on care AIS was significant,  $F(1, 142) = 63.198, p < .001, \eta_p^2 = .308$ . Inspection showed that care was more salient when the protagonist upheld care (at the cost of violating authority;  $M = .69, SE = .03$ ) compared to when the protagonist violated care (and upheld authority;  $M = .33, SE = .03$ ). The interaction effect was insignificant,  $F(1, 142) = 1.494, p = .224, \eta_p^2 = .010$ .

In the third ANOVA, a main effect of C-NIEP on the character-MFQ score for respect was not significant,  $F(1, 165) = 0.412, p = .522, \eta_p^2 = .002$ . However, a significant main effect of the protagonist's behavior on respect was observed,  $F(1, 165) = 79.197, p < .001, \eta_p^2 = .324$ . Inspection of means revealed that participants viewed the protagonist as more respectful ( $M = 5.97, SE = .12$ ) when the protagonist upheld authority compared to when the protagonist violated authority ( $M = 4.39, SE = .13$ ). The interaction effect was again not significant,  $F(1, 165) = 0.063, p = .803, \eta_p^2 < .001$ .

In the final ANOVA, the main effect of C-NIEP on the character-MFQ score for care was significant,  $F(1, 165) = 8.355, p = .004, \eta_p^2 = .048$ . Examination of means revealed that participants perceived the protagonist as more caring when respect was made dominantly prominent ( $M = 5.60, SE = .12$ ) than when respect was made overridingly prominent over care ( $M = 5.10, SE = .12$ ). Similarly, a significant main effect of the protagonist's behavior on perception was also observed,  $F(1, 165) = 37.299, p < .001, \eta_p^2 = .184$ . Inspection of means showed that participants thought the protagonist was more caring ( $M = 5.87, SE = .12$ ) when the protagonist upheld care (at the cost of violating authority) than when the protagonist violated care (to uphold authority;  $M = 4.83, SE = .12$ ). Again, the interaction effect was insignificant,  $F(1, 165) = 1.728, p = .190, \eta_p^2 = .010$ . The means and standard errors associated with the interaction effects for the four ANOVAs are shown in Table 3, while the means and standard

errors associated with the main effects for the four ANOVAs are shown in Table 4. Table 4 also reports the effect size for all main and interaction effects reported in the four analyses.

**Table 3**

*Means of AIS Open End and Character-MFQ*

Means for AIS Open End and Character-MFQ Across Behavior (Uphold/Violate Respect and Care) and C-NIEP (Dominant/Overriding) Conditions				
	Up. Respect - Viol. Care		Viol. Respect - Up. Care	
	Dominant	Overriding	Dominant	Overriding
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>
AIS-Open End Respect	.40 (.05)	.48 (.04)	.37 (.05)	.30 (.05)
AIS-Open End Care	.23 (.05)	.42 (.04)	.65 (.05)	.72 (.05)
Character-MFQ Respect	6.05 (.18)	5.89 (.17)	4.42 (.18)	4.35 (.19)
Character-MFQ Care	5.19 (.18)	4.47 (.16)	6.01 (.17)	5.74 (.18)

*Note.* Up. = Upheld; Viol. = Violated

**Table 4**

*Effects of C-NIEP and Behavior on AIS Open End and Character-MFQ*

	Main Effects for C-NIEP		Main Effects for Behavior		Main and Interaction Effects of C- NIEP and Behavior on AIS Open End and Character-MFQ		
	Dominant	Overriding	Up. Respect Viol. Care	Viol. Respect Up. Care		<i>F (df)</i>	$\eta^2$
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>			
AIS-Open End Respect	.38 (.03)	.39 (.03)	.44 <sup>A</sup> (.03)	.33 <sup>B</sup> (.04)	C-NIEP	0.01 (1, 142)	.000
					Behavior	5.31 (1, 142) *	.036
					Interaction	2.29 (1, 142)	.016
AIS-Open End Care	.44 <sup>B</sup> (.03)	.57 <sup>A</sup> (.03)	.33 <sup>B</sup> (.03)	.69 <sup>A</sup> (.03)	C-NIEP	8.38 (1, 142) **	.056
					Behavior	63.2 (1, 142) **	.308
					Interaction	1.49 (1, 142)	.010
Character-MFQ Respect	5.24 (.13)	5.12 (.13)	5.97 <sup>A</sup> (.12)	4.39 <sup>B</sup> (.13)	C-NIEP	0.41(1, 165)	.002
					Behavior	79.2 (1, 165) **	.324
					Interaction	0.06 (1, 165)	.000
Character-MFQ Care	5.60 <sup>A</sup> (.12)	5.10 <sup>B</sup> (.12)	4.82 <sup>B</sup> (.12)	5.87 <sup>A</sup> (.12)	C-NIEP	8.36 (1, 165) **	.048
					Behavior	37.3 (1, 165) **	.184
					Interaction	1.73 (1, 165)	.010

\*  $p < .05$ , \*\*  $p < .01$



**Table 4 (cont'd)**

*Note.* Superscripts of different letters represents significant mean differences between conditions within the C-NIEP or behavior manipulations.

Up. = Upheld; Viol. = Violated

These results provide several insights. First, they do not demonstrate that the prominence of respect for authority increased the salience of that intuition. However, given evidence from Study 1 supporting this effect, its absence here might be attributed to extraneous factors. Unlike Study 1, wherein respect AIS was measured shortly after the C-NIEP manipulation, in Study 2 the effect of this prominence manipulation on respect AIS was not only measured much later, but after manipulation of protagonist behavior upholding or violating authority. Quite plausibly, manipulation of the protagonist's decision to uphold or violate authority could have nullified measurable indicators of C-NIEP's effect. Of course, a priori concern that manipulating the protagonist's behavior would counteract C-NIEP's effect was the reason for conducting Study 1. Second, by comparison, the results do demonstrate evidence that the prominence of care affected the salience of the care intuition in participants' minds. Thus, H1 is supported here for care AIS.

***AIS's Ability to Moderate Protagonist Behavior's Effect on Approbation***

H2 predicted that the audience intuition salience of a superordinate intuition will strengthen the effect of observing behavior that upholds versus violates that intuition on approbation and subsequent ADT processes. To test H2, two Haye's PROCESS models (model 83, with 10,000 bootstraps) were tested for fit. The first model tested the ability of the coded-AIS score for respect to moderate the effect of a protagonist's behavior on approbation and subsequent character and story liking. The second model examined the extent to which the coded-AIS score for care moderated this effect. The two models are shown in Figures 7 and 8. The questionnaire measures for approbation and character liking were used as the mediators in these models. For all PROCESS models, AIS and dependent measures were standardized by

transforming them into z-scores. C-NIEP conditions were coded as 1 = dominantly prominent and 0 = overridingly prominent, whereas the behavior conditions were coded as 1 = upheld authority/violated care and 0 = violated authority/upheld care. In addition, a third model was tested using AMOS v. 27. Specifically, a full multigroup model was tested to determine if C-NIEP indirectly moderates the effect on behavior on approbation through respect and care AIS. This model is shown in Figure 9. Notably, Hypotheses 6 through 8 were also tested in these models. These hypotheses represent the disposition formation processes in ADT, which reasons that the morality of a protagonist's behavior increases approbation of that behavior (H6) to increase protagonist liking (H7) and subsequent story liking (H8).

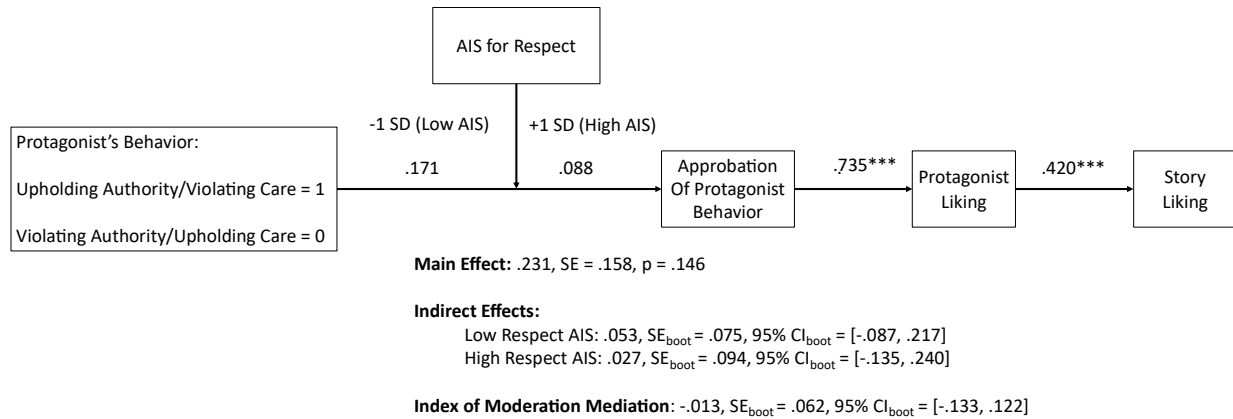
For the first PROCESS model (see Figure 7), the coded-AIS score for respect was specified as the moderator, with the C-NIEP as a covariate. Inspection of the indirect effects revealed that they were insignificant. Thus, the model did not have good fit. Examination of the individual paths revealed that while the C-NIEP manipulation positively influenced approbation ( $B = .397, SE = .167, p = .019$ ), neither the direct effect of the behavior manipulation, the direct effect of respect AIS, nor the interaction of these two variables significantly predicted approbation. All regression weights for the model can be seen in Appendix C. As expected, approbation of behavior increased protagonist liking ( $B = .735, SE = .059, p < .001$ ), and protagonist liking positively affected story liking ( $B = .420, SE = .111, p < .001$ ).

For the second PROCESS model (see Figure 8), the code-AIS score for care was specified as the moderator with the C-NIEP manipulation as a covariate. Significant indirect effects were observed when AIS for care was low (when AIS = 0;  $B_{\text{indirect effect}} = .253, SE_{\text{bootstrapped}} = .151, 95\% CI_{\text{bootstrapped}} = [.026, .607]$ ) and high (when AIS = 1;  $B_{\text{indirect effect}} = -.228, SE_{\text{bootstrapped}} = .139, 95\% CI_{\text{bootstrapped}} = [-.546, -.008]$ ). Results revealed that for the first path, the C-NIEP

manipulation ( $B = .343, SE = .171, p = .046$ ) positively influenced approbation. Further, consistent with the model for respect, neither the direct effect of the behavior manipulation nor care AIS had a significant effect on approbation. However, in contrast to that model, the interaction between the behavior manipulation and care AIS was significant ( $B = -.510, SE = .194, p = .010$ ). Specifically, when the protagonist upheld authority at the cost of violating care, those with low care intuition salience were more likely to approve the behavior (when AIS = 0;  $B_{\text{conditional effect}} = .819, SE = .367, p = .027$ ). By comparison, those with high care intuition salience disapproved the same behavior (when AIS = 1;  $B_{\text{conditional effect}} = -.728, SE = .347, p = .035$ ). Again, approbation positively influenced protagonist liking ( $B = .735, SE = .059, p < .001$ ), and protagonist liking increased story liking ( $B = .420, SE = .111, p < .001$ ).

**Figure 7**

*Model 1: Respect AIS's Moderation of Protagonist Behavior's Effect on Approbation*

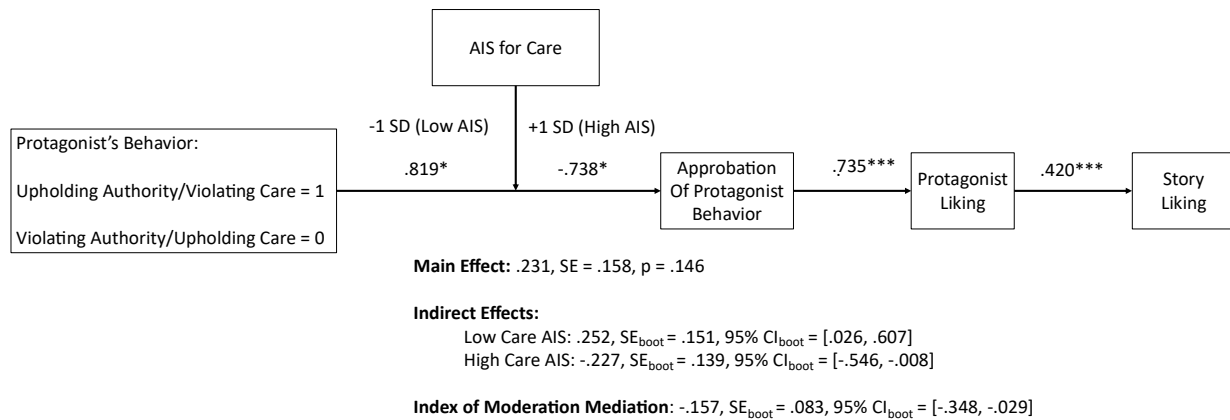


\*\*\*  $p < .001$

*Note.* The first path represents the effect of the protagonist's behavior under conditions wherein AIS for respect was high (+1 standard deviation from the mean) and low (-1 standard deviation from the mean). The second path represents approbation's effect on protagonist liking and the third path represents protagonist liking's effect on story liking. The behavior manipulation was dummy coded (1 = upheld authority and violated; 0 = violated authority and upheld care). All other variables have been transformed into z-scores.

**Figure 8**

*Model 2: Care AIS's Moderation of Protagonist Behavior's Effect on Approbation*



\*  $p < .05$ , \*\*\*  $p < .001$

*Note.* The first path represents the effect of the protagonist's behavior under conditions wherein AIS for care was high (+1 standard deviation from the mean) and low (-1 standard deviation from the mean). The second path represents approbation's effect on protagonist liking and the third path represents protagonist liking's effect on story liking. The behavior manipulation was dummy coded (1 = upheld authority and violated; 0 = violated authority and upheld care). All other variables have been transformed into z-scores.

Notably, the nonsignificant direct effect of the behavior manipulation on approbation fails to support H6, which predicted that the behavior manipulation would have a positive direct effect on approbation. However, the significant interaction between behavior and care AIS on approbation demonstrates that behavior had a positive effect when care AIS was low and a negative effect when care AIS was high. This finding is consistent with the general logic underlying this research, which suggests that AIS can strengthen or weaken the effect of a character's behavior on approbation.

Finally, the full model was examined (see Figures 9 and 10). Because the coded-AIS scores for respect and care were endogenous, to test C-NIEP's ability to indirectly moderate the effect of the protagonist's behavior on approbation through AIS, a multigroup path model was examined. The model looked at the ability of AIS to moderate the effect of behavior under

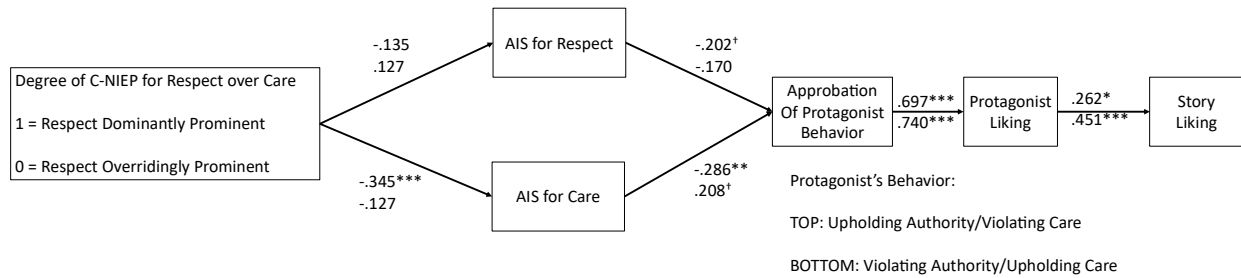
different conditions of the C-NIEP manipulation (the dominant versus overriding prominence of respect) and the behavior manipulation (upholding authority to violate care versus violating authority to uphold care). Specifically, the model compared the ability of AIS to mediate the effect of the C-NIEP manipulation on approbation under different conditions of the protagonist's behavior. Throughout the paper, the model has been discussed as describing the ability of AIS to moderate the effect of the behavior manipulation on approbation. The model tested here examines the ability of the behavior manipulation to moderate the effect of AIS on approbation. This was done because AIS is an endogenous variable in the model, and using an endogenous variable in an interaction term increases error. Importantly, testing the ability of the behavior manipulation to moderate the effect of AIS on approbation is mathematically equivalent to testing the ability of AIS to moderate the effect of behavior on approbation. While this initial model had a RMSEA that indicated good fit, other indices did not demonstrate good fit,  $X^2(18) = 36.40, p = .006, CFI = .89, TLI = .74, RMSEA = .078, X^2 / df = 2.02, AIC = 108.40$ .

To revise the model a path was added between C-NIEP and approbation. While modifications should be taken with caution, this addition only suggests that C-NIEP explains additional variance of approbation beyond its indirect effect through AIS and does not alter the hypothesized paths. This model demonstrated improved fit, with all but the TLI suggesting good fit,  $X^2(16) = 26.58, p = .046, CFI = .94, TLI = .83, RMSEA = .063, X^2 / df = 1.66, AIC = 102.58$ . To test C-NIEP's ability to indirectly moderate the effect of character behavior on approbation, the regression weights for the paths from AIS to approbation for both respect and care were individually constrained to be the same between the two behavior conditions. A drop in fit when these paths are constrained would suggest moderation. A significant drop in fit was observed when the path from AIS for care to approbation was constrained,  $\Delta X^2(1) = 5.46, p = .019$ . In

contrast, a nonsignificant drop in fit was observed when the path from AIS for respect to approbation was constrained,  $\Delta X^2(1) = .012, p = .912$ . Additionally, though not predicted, a significant drop in fit was observed when the direct path from C-NIEP to approbation was constrained,  $\Delta X^2(1) = 5.05, p = .025$ .

**Figure 9**

*Model 3: C-NIEP's Indirect Moderation of Protagonist Behavior's Effect on Approbation*



†  $p < .10$ ; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

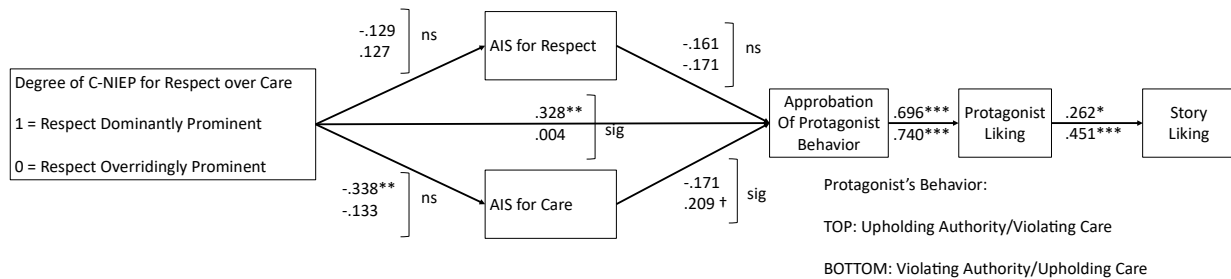
*Note.* The numbers above and below the paths from approbation of protagonist behavior to protagonist liking and from protagonist liking to story liking represent the standardized regression coefficient under conditions of upholding authority and violating care (above the path) and violating authority and upholding care (below the path). As such, in this example, the effect of protagonist liking on story liking is .697 when authority is upheld and .740 when authority is violated. Further, the number pairs next to the four paths connecting AIS (for both care and respect for authority) to C-NIEP and approbation represent the standardized regression coefficient under conditions of upholding authority and violating care (top number) and violating authority and upholding care (bottom number). For example, the number pair next to the path from C-NIEP to AIS for respect represents the effect of the dominant prominence of respect on AIS for respect under the conditions of upholding authority and violating authority. As such, in this example, the effect of dominant prominence of respect on respect AIS is -.135 when authority is upheld and .127 when authority is violated.

Building on the findings that AIS for care moderates the effect of behavior on approbation in the model in Figure 8, the results in Figure 10 suggest that C-NIEP can influence the ability of AIS to moderate the influence of the protagonist's decision on approbation and subsequent ADT processes (at least for care). This offers support for H2. In addition to supporting H2, the model in Figure 10, along with the models in Figures 7 and 8 (showing that AIS moderates behavior's influence on approbation and subsequent processes), also demonstrate

support for the classical ADT process in which the morality of a character’s behavior affects approbation, which subsequently shapes character liking and story liking. While the character’s behavior did not directly affect approbation at a level of significance due to the observed interaction effect, approbation of the protagonist’s behavior increased liking for the protagonist and subsequent story liking (thus supporting H7 and H8).

**Figure 10**

*Revised Model 3: C-NIEP’s Indirect Moderation of Protagonist Behavior’s Effect on Approbation*



†  $p < .10$ ; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

*Note.* The numbers above and below the path from C-NIEP to approbation and paths both to and from protagonist liking represent the standardized regression coefficient under conditions of upholding authority and violating care (above the path) and violating authority and upholding care (below the path). Further, the number pairs next to the four paths connecting AIS (for both care and respect for authority) to C-NIEP and approbation represent the standardized regression coefficient under conditions of upholding authority and violating care (top number) and violating authority and upholding care (bottom number). For example, the number pair next to the path from C-NIEP to AIS for respect represents the effect of dominant prominence of respect on AIS for respect under the conditions of upholding authority and violating authority. As such, in this example, the effect of the dominant prominence of respect on respect AIS is -.129 when authority is upheld and .127 when authority is violated. The sig/ns next to each number pair indicates whether there is a significant drop in model fit when the regression coefficients under both behavior conditions are constrained to be the same (sig = significant drop in fit; ns = nonsignificant drop in fit). A significant drop in fit when coefficients are constrained indicates that the ability of AIS to moderate the effect of behavior on approbation is significant.

***CNIEP’s Effect on Attention***

Attention was measured by frequency and time length of eye gaze fixations. The heat map in Figure 11 shows the distribution of fixation frequencies in different experimental

conditions. Qualitative inspection of the heatmap revealed that participants primarily fixated on three areas: the area around the text bubble that said “This is . . . the right thing to do,” the area around the protagonist’s face, and the area around the phrase “Respect your Leaders.”

Visual examination of the individual heatmaps within each condition revealed four differences of note. First, although fixation on areas around the phrase “Respect your Leaders” was generally high, participants fixated here less when the narrative made respect for authority dominantly prominent and the protagonist upheld authority to violate care, compared to other conditions. Second, participants fixated on the protagonist’s face less when the narrative made respect overridingly prominent and the protagonist upheld authority to violate care, compared to other conditions. Third, participants fixated on areas around the word “Kindness” more when the narrative made respect dominantly prominent and the protagonist violate authority to uphold care, compared to other conditions. Finally, participants fixated on areas around the phrase “Respect you Leaders” less when the narrative made respect overridingly prominent and the protagonist violated authority to uphold care, compared to other conditions. Beyond visual inspection, chi-square, ANOVA, and correlational analyses were used to test attention hypotheses.

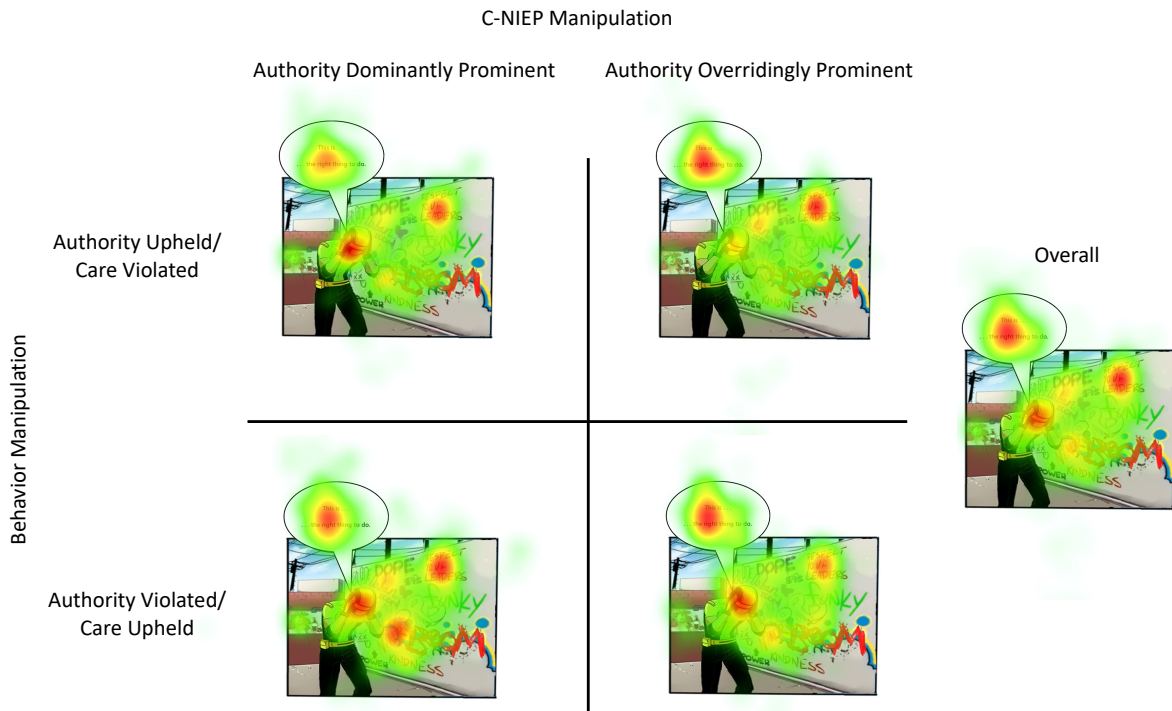
H3 and H4 predicted that the degree of C-NIEP will directly, and indirectly (through AIS), shape attention to intuition-related cues in the narrative. Specifically, it was expected that C-NIEP will shape audiences’ eye gaze toward different cues that were identified a priori as being related to care (i.e., “Kindness”) and respect (i.e., “Respect your Leaders”). These cues appeared in the background of the comic during the part of the narrative where the protagonist decides to uphold either care or authority. For the eye gaze analyses, participants ( $n = 52$ ) were excluded from analysis if they either indicated that they wore bifocal glasses or eye makeup, had



an eye astigmatism, or the eye tracker collected gaze from them less than 50% of the time during this part of the comic. The number of participants excluded from analysis did not significantly vary between conditions,  $\chi^2(3) = 1.407, p = .704$ .

**Figure 11**

*Heat Map of Graffiti Wall across Conditions*



*Note.* The heatmap visualizes where combined participants fixated on Page 8 (i.e., the graffiti wall page) overall and between conditions. Redder areas represent areas where fixation was more frequent. The phrase “Respect your Leaders” is on the upper right of the panel. The word “Kindness” is at the bottom center of the panel.

To test H3, first, two 2 (C-NIEP: dominant vs. overriding prominence) x 2 (protagonist behavior: upholding vs. violating) ANOVAs were performed on both the total fixation length (ms) and fixation count on the phrase “Respect your Leaders.” The first ANOVA did not demonstrate a significant main effect of the C-NIEP manipulation on total fixation time,  $F(1, 112) = 0.700, p = .404, \eta_p^2 = .006$ . However, the main effect of the behavior manipulation was

significant,  $F(1, 112) = 5.737, p = .018, \eta_p^2 = .049$ . Inspecting the means between conditions revealed that participants fixated longer on “Respect your Leaders” when the protagonist upheld authority and violated care ( $M = 1,113.47$  ms,  $SE = 75.11$  ms), compared to when the protagonist violated authority to uphold care ( $M = 858.14$  ms,  $SE = 75.65$ ). The interaction effect was insignificant,  $F(1, 112) = 0.162, p = .688, \eta_p^2 = .001$ .

The second ANOVA did not demonstrate a significant main effect for C-NIEP,  $F(1, 112) = 0.239, p = .626, \eta_p^2 = .002$ , or the protagonist’s behavior,  $F(1, 112) = 1.405, p = .238, \eta_p^2 = .012$ , on the number of fixations at “Respect your Leaders.” Similarly, the interaction effect was nonsignificant,  $F(1, 112) = 0.509, p = .477, \eta_p^2 = .005$ .

Table 5 shows the four cells’ means associated with the interaction effects for analyses examining fixation length and fixation count. Table 6 shows the means and standard errors associated with the main effects for the two ANOVAs examining fixation length and count. Table 6 also reports the effect size for all main and interaction effects reported in the two analyses.

**Table 5**

*Means for Interaction Effect of Fixation Length and Fixation Count on “Respect your Leaders”*

Means for Fixation Length and Count Across Behavior (Uphold/Violate Respect and Care) and C-NIEP (Dominant/Overriding) Conditions				
	Up. Respect - Viol. Care		Viol. Respect - Up. Care	
	Dominant	Overriding	Dominant	Overriding
Fixation Length	<u><i>M (SE)</i></u> 1136.59 (115.70)	<u><i>M (SE)</i></u> 1090.35 (95.81)	<u><i>M (SE)</i></u> 924.22 (100.20)	<u><i>M (SE)</i></u> 792.05 (113.36)
Fixation Count	3.63 (.43)	3.71 (.36)	3.44 (.37)	2.96 (.42)

*Note.* Up. = Upheld; Viol. = Violated

**Table 6**

*Means for Main Effects of C- NIEP and Behavior on Fixation Length and Count for “Respect your Leaders”*

	Main Effects for C-NIEP		Main Effects for Behavior		Main and Interaction Effects of C- NIEP and Behavior on Fixation Length and Count		
	Dominant	Overriding	Up. Respect Viol. Care	Viol. Respect Up. Care			
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>F (df)</i>	<i>η<sup>2</sup></i>	
Fixation Length	1030.40 (76.53)	941.20 (74.21)	1113.47 <sup>A</sup> (75.11)	858.14 <sup>B</sup> (75.65)	C-NIEP	0.70 (1, 112)	.006
					Behavior	5.74 (1, 112) *	.049
					Interaction	0.16 ((1, 112)	.001
Fixation Count	3.53 (.29)	3.34 (.28)	3.67 (.28)	3.20 (.28)	C-NIEP	0.24 (1, 112)	.002
					Behavior	1.41 (1, 112)	.012
					Interaction	0.51 (1, 115)	.005

\*  $p < .05$

*Note.* Superscripts of different letters represents significant mean differences between conditions within C-NIEP or Behavior manipulation.

Up. = Upheld; Viol. = Violated

In regard to eye gaze on the word “Kindness,” many participants did not gaze at the word ( $n = 52$ ), with a score of zero on fixation time and count measures (See Table 7). This made the distribution for these measures positively skewed, with an overrepresentation of zeros. Since these zeros indicated true absence, a two-part model approach was utilized by splitting the gaze measures into a categorical variable measuring the presence and absence of fixation on “Kindness” and a continuous variable measuring both total fixation length and count for participants who did fixate on the word (Boulton & Williford, 2018).

After splitting the measures, a 2 (C-NIEP: dominant vs. overriding) X 2 (protagonist’s behavior: upholding vs. violating) X 2 (fixated on “Kindness”: yes, no) chi-square was first conducted. Significant differences in fixation were observed between the two C-NIEP conditions when authority was violated to uphold care,  $\chi^2 (1, N = 57) = 3.944, p = .047, Cramer’s V = .263$ . Inspection of adjusted standardized residuals revealed that, against expectations, participants

were more likely to fixate on “Kindness” in the dominant prominence condition ( $n = 20$ , *adj. std. resid.* = 1.99) than in the overriding prominence condition ( $n = 9$ , *adj. std. resid.* = -1.99). No significance differences in fixation were observed when authority was upheld to violate care,  $\chi^2(1, N = 64) = 0.016, p = .898, Cramer's V = .017$ . Next, two 2 (C-NIEP: dominant vs. overriding) x 2 (protagonist behavior: upholding vs. violating) ANOVAs were performed on the total fixation length (ms) and fixation count for the participants who did fixate on “Kindness.” No significant main or interaction effects were observed on fixation length or fixation count,  $F_s < 1$ .

**Table 7**

*Number of Participants who Fixated on “Kindness” across Conditions*

	Upheld Authority – Violated Care		Violated Authority – Upheld Care	
	Dominant	Overriding	Dominant	Overriding
	<u><i>N</i></u>	<u><i>N</i></u>	<u><i>N</i></u>	<u><i>N</i></u>
	<u>(std. adj. resid.)</u>	<u>(std. adj. resid.)</u>	<u>(std. adj. resid.)</u>	<u>(std. adj. resid.)</u>
Fixated on “Kindness”	14 (-0.13)	21 (0.13)	20 (1.99)	9 (-1.99)
Did not fixate on “Kindness”	10 (0.13)	14 (-.013)	12 (-1.99)	16 (1.99)

*Note.* Standardized adjusted residual over (+-) 1.96 indicates significant differences in frequencies between cells. Cells are compared within each behavior condition and not between.

Together, these results suggest that C-NIEP interacts with behavior to influence attention, but not in the direction expected. Instead of conflict (i.e., the overriding condition) increasing attention to the subordinated intuition (i.e., care) such that attention to the subordinated intuition was higher when conflict was absent (i.e., the dominant condition). Therefore, although C-NIEP was found to influence attention, H3 was not supported. To test H4, Pearson product correlations were computed to examine the relationship between coded-AIS scores for respect and fixation to “Respect your Leaders” and code-AIS scores for care and fixation to “Kindness.” Since no significant correlations were observed, mediation was not tested and H4 was not supported.

### *Attention's Ability to Moderate Protagonist Behavior's Effect on Approbation*

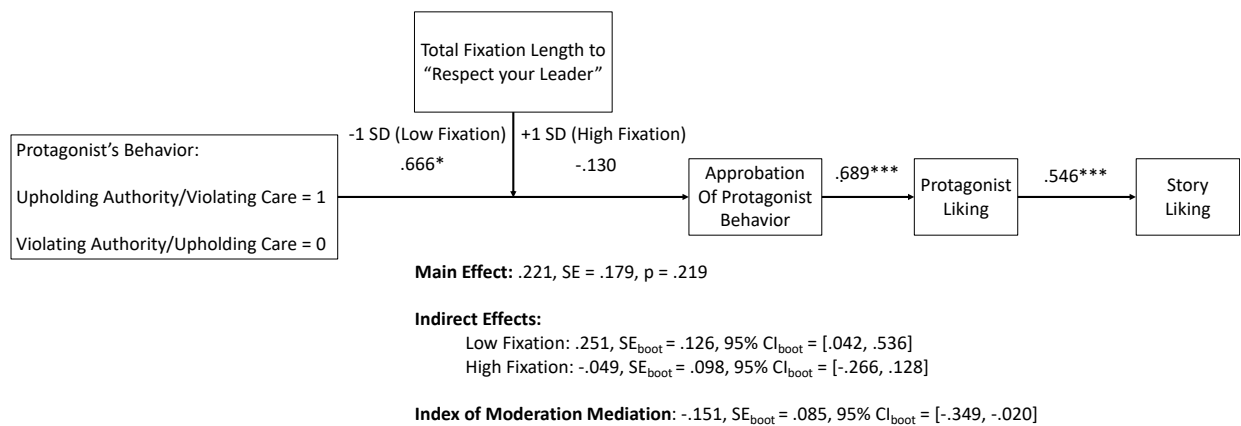
H5 predicted that attention to intuition-related cues will strengthen the effect of observing behaviors that uphold versus violate that intuition on approbation of the behavior and subsequent ADT processes. To test H5, three Hays' PROCESS models (model 83, with 10,000 bootstraps) were tested for fit. The first two models tested the ability of participant fixations on "Respect your Leaders" to moderate the effect of a protagonist's behavior on approbation and subsequent character and story liking. The analysis was conducted for both total fixation length and fixation count. The third model examined whether participants' fixations on "Kindness" (yes = 1, no = 0) moderated this effect. Again, the questionnaire measures for approbation and character liking were used as mediators for these models. All regression output for these models can be viewed in Appendix C.

For the first PROCESS model (see Figure 12), the total fixation length of "Respect your Leaders" was specified as the moderator with C-NIEP dummy coded as a covariate. A significant indirect effect was observed when fixation length was low (when total fixation length = 416.55 ms;  $B_{\text{indirect effect}} = .251$ ,  $SE_{\text{bootstrapped}} = .126$ ,  $95\% CI_{\text{bootstrapped}} = [.042, .536]$ ), but not when it was high (when total fixation length = 1,557.19 ms;  $B_{\text{indirect effect}} = -.049$ ,  $SE_{\text{bootstrapped}} = .099$ ,  $95\% CI_{\text{bootstrapped}} = [-.267, .128]$ ). Thus, the model had good fit. Results revealed that neither the behavior manipulation nor fixation had a significant direct effect on approbation, and their interaction fell just short of significance ( $B = -.401$ ,  $SE = .203$ ,  $p = .051$ ). Though interpreting findings that fall just shy of critical values can be unwarranted, describing observed patterns can have heuristic value. Thus, the data patterns are described here. Against expectations, when the protagonist upheld authority at the cost of violating care, those who fixated on "Respect your leaders" for a shorter amount of time were more approving of the

behavior (when total fixation length = 416.55 ms;  $B_{\text{conditional effect}} = .666$ ,  $SE = .279$ ,  $p = .019$ ). The effect of upholding authority on approbation was insignificant for participants who fixated on “Respect your Leaders” for a longer amount of time (when total fixation length = 1,557.19 ms;  $B_{\text{conditional effect}} = -.130$ ,  $SE = .288$ ,  $p = .653$ ).

**Figure 12**

*Model 4: “Respect your Leaders” Fixation Length’s Moderation of Protagonist Behavior Effect on Approbation*



\*  $p < .05$ , \*\*\*  $p < .001$

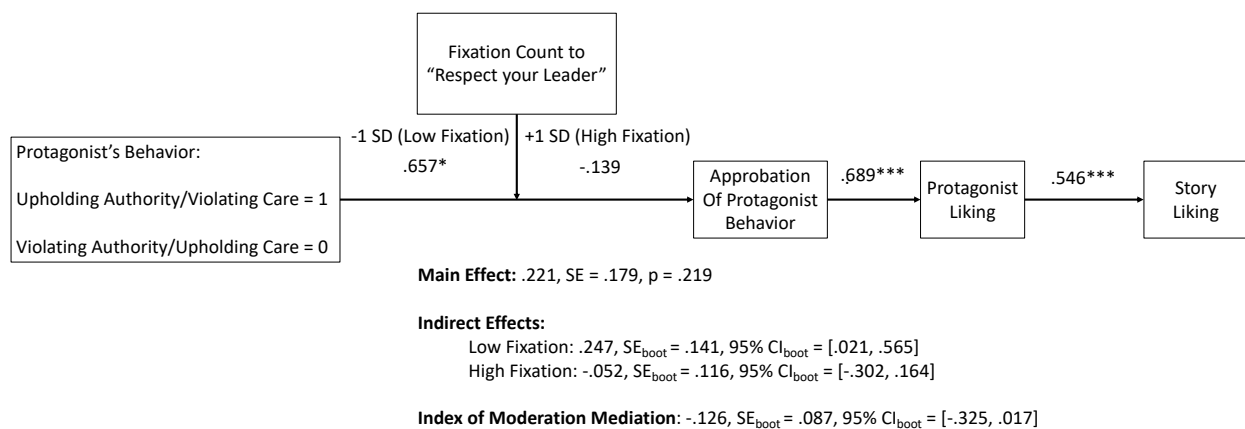
*Note.* The first path represents the effect of the protagonist’s behavior under conditions of when fixation length was high (+1 standard deviation from the mean) and low (-1 standard deviation from the mean). The second path represents approbation effect on protagonist liking and the third path represents protagonist liking effect on story liking. The behavior manipulation was dummy coded (1 = upheld authority and violated; 0 = violated authority and upheld care). All other variables have been transformed into z-scores.

For the second PROCESS model (see Figure 13) the fixation count for “Respect your Leaders” was specified as the moderator. Patterns were largely the same as the previous model. A significant indirect effect was observed when the number of fixations was low (when fixation count = 1;  $B_{\text{indirect effect}} = .247$ ,  $SE_{\text{bootstrapped}} = .141$ ,  $95\% CI_{\text{bootstrapped}} = [.021, .565]$ ), but not when it was high (when fixation count = 6;  $B_{\text{indirect effect}} = -.052$ ,  $SE_{\text{bootstrapped}} = .116$ ,  $95\% CI_{\text{bootstrapped}} = [-.302, .164]$ ). Thus, the model had good fit. Like the findings for fixation length, results revealed

that neither the behavior manipulation nor fixation had a significant direct effect on approbation, and the interaction effect between behavior and fixation count that fell just short of significance ( $B = -.335, SE = .197, p = .091$ ). Once again, though these findings fell short of the critical value the pattern associated with this is described for heuristic value. Inspection of conditional effects revealed, again, when the protagonist upheld authority at the cost of violating care, those who fixated less frequently at “Respect your Leaders” approved the behavior (when fixation count = 1;  $B_{\text{conditional effect}} = .657, SE = .302, p = .032$ ), while this effect was insignificant for those who fixated more frequently (when fixation count = 6;  $B_{\text{conditional effect}} = -.139, SE = .309, p = .653$ ).

**Figure 13**

*Model 5: “Respect your Leaders” Fixation Count’s Moderation of Protagonist Behavior’s Effect on Approbation*



\*  $p < .05$ , \*\*\*  $p < .001$

*Note.* The first path represents the effect of the protagonist’s behavior under conditions of when fixation count was high (+1 standard deviation from the mean) and low (-1 standard deviation from the mean). The second path represents approbation effect on protagonist liking and the third path represents protagonist liking effect on story liking. The behavior manipulation was dummy coded (1 = upheld authority and violated; 0 = violated authority and upheld care). All other variables have been transformed into z-scores.

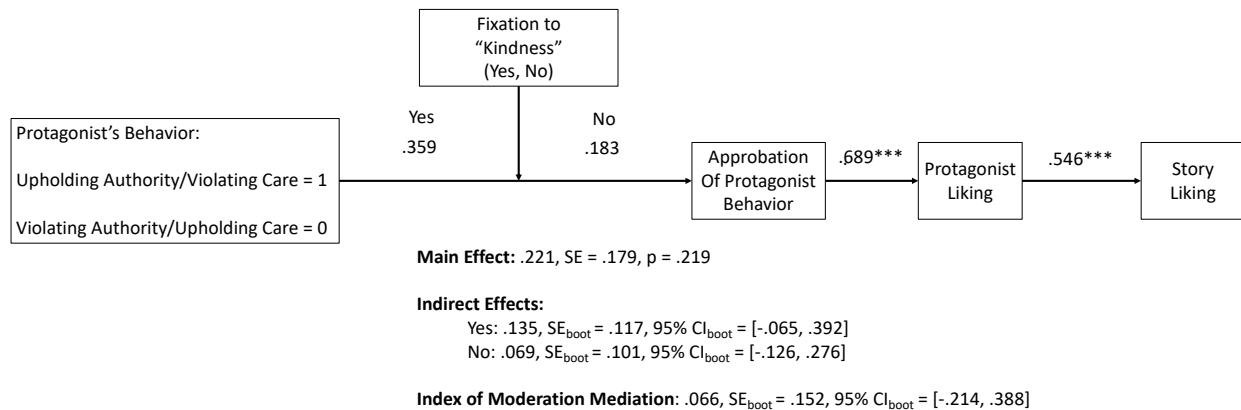
For the final PROCESS model (see Figure 14), whether participants fixated on “Kindness” was specified as the moderator. The indirect effects in this model were

nonsignificant. Thus, the model did not have good fit, and the moderation between protagonist behavior and fixation to “Kindness” on approbation was not observed.

Taken together, the findings for attention observed were generally not aligned with predictions that making C-NIEP dominant can increase attention to cues exemplifying the superordinate intuition (i.e., respect for authority) and decrease attention to cues exemplifying the subordinate intuition (care). Additionally, results did not align with predictions that increased attention to cues exemplifying the superordinate intuition would strengthen the effect of upholding that intuition on approbation. Instead, results imply that decreased attention to these cues strengthened behavior’s effect on approbation. As such, H5 was not supported.

**Figure 14**

*Model 6: “Kindness” Fixation’s Moderation of Protagonist Behavior’s Effect on Approbation*



\*\*\*  $p < .001$

*Note.* The first path represents the effect of the protagonist’s behavior under conditions of when participants fixated on “Kindness” (1 = yes; 0 = no). The second path represents approbation effect on protagonist liking and the third path represents protagonist liking effect on story liking. The behavior manipulation (1 = upheld authority and violated; 0 = violated authority and upheld care) and whether participants fixated on “Kindness” were dummy coded. All other variables have been transformed into z-scores.



### *C-NIEP's Effect on Appraisal Speed*

Up to this point, analyses focused on the eight hypotheses in Part 1 of this investigation, the predicted model. Part 2 contained only a single hypothesis, H9. To test the H9, two 2 (C-NIEP: dominant vs. overriding prominence) x 2 (character behavior: upholding vs. violating) ANCOVAs were conducted to examine each factor's influence on measures of two latency scores, those representing participants' approbation of the protagonist's behavior and protagonist liking. The average of the reaction time scores for the second and third practice statements was included as a covariate.<sup>7</sup>

The first ANCOVA examined the speed of approbation. Notably, although the effect of C-NIEP was trivial,  $F(1, 153) = 0.014, p = .907, \eta_p^2 < .001$ , the effect of the character's behavior on speed of the behavior's approbation was significant,  $F(1, 153) = 8.124, p = .005, \eta_p^2 = .050$ . Inspection of means showed that participants evaluated the protagonist's actions quicker when he upheld care at the cost of violating authority ( $M = 1,725$  ms,  $SE = .076$ ) compared to when he upheld authority at the cost of violating care ( $M = 2,022$  ms,  $SE = .071$ ). Lastly, the interaction effect was not significant,  $F(1, 153) = 2.860, p = .093, \eta_p^2 = .018$ .

The second ANCOVA examined the speed of protagonist-liking appraisals. This analysis produced a significant main effect for C-NIEP,  $F(1, 153) = 6.256, p = .013, \eta_p^2 = .039$ , as well as a significant main effect for character's behavior,  $F(1, 153) = 3.970, p = .048, \eta_p^2 = .025$ . The interaction effect was trivial,  $F(1, 153) = 0.100, p = .752, \eta_p^2 = .001$ . Inspection of means for the effect of C-NIEP reveals that participants judged the protagonist's likability quicker when the story made respect dominantly prominent ( $M = 1,267$  ms,  $SE = .050$ ) compared to when respect was made overridingly prominent ( $M = 1,446$  ms,  $SE = .051$ ). This finding is in line with H9. Similar to the speed of approbation, examining the means for the effect of protagonist behavior

showed that participants judged the protagonist's likability quicker when he upheld care at the cost of violating authority ( $M = 1,285$  ms,  $SE = .052$ ) compared to when he upheld authority at the cost of violating care ( $M = 1,428$  ms,  $SE = .049$ ).

Taken together, the findings for response speed provide initial evidence that C-NIEP can influence the mental mechanisms used to form affective dispositions (i.e., intuitive or deliberative processes). While differences in approbation speed across C-NIEP conditions were not observed, the fact that differences in speed during judgment of likability were observed supports H9.

## DISCUSSION

The present investigation set out to better understand the underlying mechanism that determined an audience's affective disposition toward narrative characters who face moral conflicts (i.e., who uphold one moral intuition at the cost of violating another). In doing so, several MADM-based predictions were tested. This section overview's the findings reported and follows this with a discussion of their theoretical and social implications.

### Overview of Findings

Substantial research on ADT (Zillmann, 2000) shows that a character's moral behavior increases positive disposition formation (e.g., Grizzard et al., 2018; 2019; Krakowiak & Oliver, 2012; Tamborini, Grady et al., 2020; Weber et al., 2008). MADM (Tamborini, Grizzard et al., 2021) attempts to explicate ADT by suggesting that moral behaviors can be defined in terms of the upholding or violation of salient moral intuitions.

Recent MADM research indicates that C-NIEP can increase the effect of upholding intuitions on positive disposition formation, and this effect is mediated by audience intuition salience (Tamborini et al., 2019). Even though this research is informative, it could not directly test MADM's prediction that audience intuition salience can strengthen the effect of upholding an intuition on disposition formation. Notably, some research demonstrates that trait intuition accessibility can moderate an observed behavior's effect on disposition formation (Eden & Tamborini, 2017). However, no research to date examines whether this effect can be moderated by state intuition salience and, if so, whether state audience intuition salience can be shaped by C-NIEP. The research reported here examined this possibility by testing a model predicting that C-NIEP could influence audience intuition salience to moderate the effect of character behavior on disposition formation.

Beyond this model, the study examined two other mechanisms underlying an audience member's moral judgment during disposition formation, especially judgments in narratives where a character is faced with a moral conflict. The first area examined whether the moderating effect of audience intuition salience can be explained by increased attention to salient intuition-related cues. Therefore, the study asked if C-NIEP could influence attention to moderate the effect of character behavior on disposition formation. The second area investigated the extent to which C-NIEP can influence evaluative response-times, as an indication of intuitive versus deliberative processing during disposition formation. Pursuant to this, the study asked if C-NIEP could alter the speed with which character behavior affects disposition formation.

The results of this study produced several key findings concerning these questions. First, it provided some support for MADM-based logic suggesting that C-NIEP can influence audience intuition salience and, through this influence, C-NIEP can shape the ability of audience intuition salience to moderate protagonist behavior's effect on approbation and subsequent ADT process. Second, although effects on attention were observed, results did not show support for the MADM's prediction that C-NIEP can shape attention to moderate the effect of a protagonist's behavior on disposition formation and subsequent ADT process. Third, the study provided some support for MADM-based logic predicting that C-NIEP can alter the speed with which character behavior affects disposition formation. Each of these will be discussed in turn.

### ***Can C-NIEP Alter AIS's Ability to Moderate Character Behavior's Effect on Disposition Formation?***

Before discussing the ability of audience intuition salience to moderate the behavior's impact on disposition formation, it is important to consider the influence of C-NIEP on audience intuition salience alone. Previous research provided initial indications that C-NIEP might have

the ability to shape the comparative salience (i.e., superordinate and subordinate) of intuitions in conflict (Tamborini et al., 2019; 2020). Notably, the ability to attribute an increase to audience intuition salience to C-NIEP was limited by the fact that C-NIEP was confounded with the character's decision to always uphold the superordinate intuition. As such, it is possible that the increased audience intuition salience observed in this previous research resulted more from the character's decision of which intuition to uphold than from C-NIEP's emphasis on one intuition or another. By replicating the findings from the previous study after removing this confound, the current study provides evidence addressing this rival hypothesis.

Consistent with this previous research, the present investigation found that C-NIEP can shape the comparative salience of intuitions in conflict regardless of which intuition the character decided to uphold. In Study 1, participants only viewed the first part of the story, which included the C-NIEP manipulation without the protagonist's decision to uphold one intuition at the cost of violating the another. This allows us to observe the direct effect of the C-NIEP manipulation on audience intuition salience without the interference of the protagonist's decision. Results showed that making the prominence of respect dominant (compared to overriding) increased the salience of respect for one of the two measures. Specifically, while condition did not affect how likely participants were to mention respect in their unprompted open-ended responses, it did affect the second measure of respect's salience. Participants considered the protagonist as more respectful when respect was made dominantly prominent over care in the story (as compared to overridingly prominent), even though the protagonist's behavior was constant.

More compellingly, making the prominence of respect dominant (compared to overriding) decreased the salience of care on both salience measures. As such, participants were both more likely to (1) mention care in their unprompted open-ended responses and (2) rate the

protagonist as less caring when respect was made overridingly (compared to dominantly) prominent over care in the story. Together, these findings suggest that (1) a narrative can make an intuition more salient to audiences by making exemplars of that intuition more prominent, and (2) the comparative prominence of exemplars for conflicting intuitions can shape the comparative salience of these intuitions in the minds of audiences.

Notably, the findings showing C-NIEP's influence on care were replicated for both measures of audience intuition salience in Study 2, even after C-NIEP *and* the protagonist's behavior were manipulated. This same pattern was not observed, however, for either measure of audience intuition salience for respect. Instead of the effect of C-NIEP, the protagonist's behavior affected the accessibility of respect for authority. Specifically, respect was more salient to those who witnessed the protagonist upholding authority at the cost of care, independent of how prominent respect was in the story. In other words, manipulating the protagonist's decision to uphold authority (or not) seemed to overpower any effect of the C-NIEP manipulation. This observation will be discussed in more detail below.

After finding evidence for C-NIEP's ability to strengthen or weaken audience intuition salience, the question of whether audience intuition salience can moderate the impact on disposition formation was examined. Results support predictions both that (1) audience intuition salience can moderate a character's behavior impact on approbation and subsequent ADT processes and (2) C-NIEP can strengthen or weaken the moderating effect of audience intuition salience.

Specifically, making the C-NIEP of respect dominantly prominent (compared to overridingly prominent) weakened the audience intuition salience of care, which subsequently weakened the ability of care's audience intuition salience to moderate the positive effect of

behavior (upholding authority over care) on approbation and subsequent ADT processes. In other words, making respect dominantly salient reduced the ability of the audience intuition salience of care to hinder the effect of upholding authority on approbation and subsequent ADT processes. As such in the dominant condition, when care was fully subordinated by the prominence of respect in the narrative, participants viewed the upholding of authority (even at the cost of care) as moral because care was not salient to them. By comparison, in the overriding condition, when care was not fully subordinated by the prominence of respect, participants viewed the upholding of authority at the cost of care as less moral because care was salient. Thus, this is direct evidence that narratives can guide the formation of affective dispositions toward characters by making moral-intuition exemplars more or less prominent in the story, apart from the character's behavior.

With that said, evidence from the present investigation does not support predictions that C-NIEP can affect the ability of respect's audience intuition salience to moderate character behavior's influence on approbation and subsequent ADT processes. There are several possible explanations for why this moderation was not observed. First, evidence from this study shows that the behavior manipulation (i.e., upholding vs. violating authority) influenced the audience intuition salience of respect. As suggested already, this may have nullified the effect of the C-NIEP manipulation. Second, evidence also indicates that, even after the manipulation, the audience intuition salience of care was higher than respect's intuition salience among participants. This may indicate the general superordinance of care's salience among the participant sample, which may have attenuated C-NIEP's ability to increase the audience intuition salience of respect at the same rate. Third, by design, the C-NIEP manipulation in this study always made respect the superordinate intuition. This may have produced a ceiling effect

for the respect's salience, thus reducing the variance needed to observe moderation. However, this explanation seems less likely given the plausibility that the audience intuition salience of care was generally superordinate among the participant sample. As such, it is not expanded further. Instead, the first two possibilities are explored.

As stated, the first explanation builds on the possibility that the behavior manipulation nullified the influence of an intuition's prominence in narrative content. Findings in this study show that when behavior upheld an intuition (whether it was authority or care), this upholding increased the audience intuition salience of that intuition. As such, when the character decided to uphold authority at the cost of care, the salience of respect increased, and the salience of care decreased. By contrast, when care was upheld at the cost of authority, the salience of respect decreased, and the salience of care increased. This is not surprising, as previous research has demonstrated a correlation between a character's moral/immoral behaviors and audience intuition salience (Eden et al., 2014). Moreover, MADM-base logic would suggest that when a character's behavior upholds an intuition (especially at the cost of violating another) that act itself can increase the intuition's comparative prominence in the narrative. Therefore, it is possible that a highly prominent action, such as the decision by the protagonist during the climax to uphold or violate an intuition, could nullify the effect of other prominent moral-exemplar cues to shape audience intuition salience.

Notably, while the interaction effect between the C-NIEP and behavior manipulations on the audience intuition salience of both respect and care were insignificant, inspection of related means suggests that behavior (i.e., a decision to uphold or violate the superordinate intuition) may be able to strengthen or weaken C-NIEP's effect on comparative audience intuition salience (see Table 3). Specifically, when respect was dominantly prominent and upheld, authority was



more salient ( $M = .40, SE = .05$ ) than care ( $M = .23, SE = .05$ ). By comparison, when respect was dominant but care was upheld, care was more salient to audiences ( $M = .65, SE = .05$ ) than respect ( $M = .37, SE = .05$ ). A similar pattern can be observed when respect was overriding. If authority was upheld, both respect ( $M = .48, SE = .04$ ) and care ( $M = .42, SE = .04$ ) were similarly salient. In contrast, if care was upheld, respect ( $M = .30, SE = .05$ ) was less salient than care ( $M = .72, SE = .05$ ).

Given that this study's design always made respect the superordinate intuition and care subordinate, this pattern of means suggests that upholding the subordinated intuition at the cost of the superordinate intuition may embody an expectancy violation. Since expectancy violations can stand out in an audience member's mind (i.e., they are salient), expectancy violations might be a narrative cue capable of increasing an intuition exemplar's prominence. In other words, if the behavior is an exemplar of an intuition, the behavior has greater C-NIEP when it is an expectancy violation than when it is not. Future research should examine the extent to which a positive versus a negative expectation violation can increase or decrease perceived prominence. Expectancy violation theory (Burgoon & Jones, 1976; see Burgoon, 2015) would suggest that a negative expectancy violation has a stronger effect on perception. As such, a negative expectancy violation might be an unexamined feature of exemplars that should be included in discussion of exemplar prominence.

This may be one of the reasons why the C-NIEP manipulation's positive influence on respect's intuition salience was not observed in Study 2. The expected effect of the C-NIEP manipulation on respect's intuition salience was observed only in Study 1. Potentially, varying the protagonist's behavior in Study 2 increased expectations that respect would be upheld, but then the protagonist upheld a different moral intuition (i.e., care). Accordingly, it may be that the

protagonist's decision to unexpectedly uphold care (at the cost of authority) was highly prominent, and this prominence nullified the C-NIEP manipulation's influence on the audience intuition salience for respect.

The second account examines the possibility that the chronic salience of care is generally superordinate to the chronic salience of respect for authority among the participant sample. Two observations are relevant here. One is that this study's procedures controlled narrative content to make respect's comparative prominence superordinate and care's subordinate. While this might be expected to make respect more salient to participants than care, this was not the case. Instead, the audience intuition salience for care ( $M = .49$ ,  $SD = .33$ ) was slightly higher than respect ( $M = .40$ ,  $SD = .28$ ),  $t(145) = 2.595$ ,  $p = .010$ , *Cohen's d* = .215. The other observation is that while the intuition salience of care significantly altered disposition formation, the intuition salience of respect did not have the same effect. Together, these observations are in line with previous research suggesting that the intuition salience of care is generally higher than the intuition salience of respect, and that care can have a greater impact on positive disposition formation than respect (Tamborini et al., 2019).

While there may be several possible reasons for this pattern, one likely explanation is that participants in these studies are generally less sensitive to respect at the trait level compared to care. Some research suggests care is more accessible than respect for authority among individuals who are more liberal (Graham et al., 2009) or from WEIRD cultures (Doğruyol et al., 2019). As such, it might be the case that the differences in overall trait salience between care and authority may be driving the varying strength of C-NIEP's ability to moderate character behavior's effect on disposition formation through the intuition salience of respect and care.

## ***Can C-NIEP Alter Attention's Ability to Moderate Behavior's Effect on Disposition Formation?***

Little work has examined the role of attention during moral judgment and disposition formation (Fiedler & Glöckner, 2015; Gantman & Van Bavel, 2015). In one exception, Tamborini, Baldwin et al. (2020) observed that varying dominant versus overriding prominence of the superordinate intuition affected attention. Specifically, Tamborini et al. varied care to be dominantly or overridingly prominent over authority in a narrative where the protagonist always upheld care. Making care dominantly prominent increased audience attention to cues exemplifying care. This was interpreted to suggest that increasing the C-NIEP of a superordinate intuition can increase attention to related cues.

The present investigation examined the main and interaction effects of both C-NIEP degree and behavior (upholding or violating the superordinate intuition) on attention to cues exemplifying the intuitions made superordinate and subordinate by C-NIEP. Here, the main effect of C-NIEP on attention to the superordinate intuition found in previous research (Tamborini, Baldwin et al., 2020) was not replicated. Instead, the results showed (a) an effect of behavior (i.e., upholding authority) increased attention to cues exemplifying the superordinate intuition (i.e., the phrase “Respect your Leaders”), and (b) a significant interaction effect between C-NIEP and character behavior on attention to cues exemplifying the subordinated intuition (i.e., the word “Kindness”). Specifically, when care was upheld (and authority violated), attention to cues exemplifying care was greater when respect was made dominantly rather than overridingly prominent.

However, the patterns observed did not show that increasing the prominence of the superordinate intuition when it is upheld can increase attention to cues exemplifying it. In the

present investigation, respect was always the superordinate intuition. Yet when authority was upheld (and care was violated), attention to cues exemplifying respect for authority was not greater when its prominence was increased (i.e., when respect was made dominantly rather than overridingly prominent). Notably, whereas the previous study by Tamborini, Baldwin et al. (2020) controlled the use of exemplar cues to make the prominence of care always superordinate and respect always subordinate, this was reversed in the current study. C-NIEP was controlled to always make respect superordinate and care subordinate. The only variance in C-NIEP was degree (dominantly versus overridingly superordinate).

Considering this, the current study's failure to observe that strengthening the prominence of an upheld superordinate intuition can increase attention to cues exemplifying it may indicate several things. It may suggest that C-NIEP does not have the ability to shape attention as predicted in the hypothesized model, or that the model fails to account for how behavior interacts with prominence. Alternatively, it may suggest that whether a moral intuition's satisfaction is fully satiated can alter attention. Perhaps the failure to fully satiate an intuition (in this case, the upholding of care or authority when it is subordinated) increases attention to cues exemplifying that intuition's full satisfaction. As well, it may suggest that increasing the prominence of an upheld superordinate intuition has a different effect on attention when the intuition is care rather than respect for authority. This may be true for several reasons. For example, it may be that upholding care after respect was made dominantly superordinate (and care was completely subordinated) created an expectancy violation that increased attention to cues exemplifying care. These possibilities are discussed in turn.

First, the possibility that C-NIEP may not have the ability to shape attention as predicted in the hypothesized model should not be overlooked. The MADM implies that C-NIEP can

direct audiences' disposition toward characters through attentional mechanisms. However, the model does not provide a detailed explication on how C-NIEP influences different components of attention.

For instance, whether an intuition is made dominantly versus overridingly prominent in the narrative may influence an audience member's selection, modulation, and vigilance towards cues exemplifying that intuition to differing degrees (Chun et al., 2011; see also Klebig, in preparation). It may be the case that when a superordinate intuition becomes dominantly salient to audience members, attending to information about the superordinate intuition may be automatic and bottom-up in nature. Thus, audiences may more frequently select and modulate cues exemplifying the superordinate intuition without engaging in high amounts of vigilance. By comparison, if a superordinate intuition is overridingly salient to audiences, attention may be more top-down and deliberate. Therefore, attention may be split between multiple cues exemplifying different intuitions, which would decrease the amount of selection and modulation towards any one cue exemplifying the superordinate intuition. Nevertheless, vigilance should increase for a cue that is selected and modulated. As such, it might be hasty to conclude that C-NIEP has no influence on an audience member's attention to moral intuition exemplars in narratives. Nevertheless, a more detailed explication in this area is needed to guide future research in this area.

Second, the unsupported findings in this research might suggest that a moral intuition's satisfaction can alter audiences' attention (Gantman & Van Bavel, 2016). In research on the moral pop-out effect, initial accounts have suggested that an audience's motivation to attend to moral information increases when an intuition is accessible but not satiated, in comparison to

when it is satiated. Thus, it might be the case that having the most salient intuition satisfied in the story would decrease audience attention to cues exemplifying that intuition.

However, the results of the present investigation do not seem to align with this explanation. Specifically, audience members attended to cues representing the superordinate intuition (i.e., respect) longer when the intuition was upheld rather than violated. Similarly, cues related to the subordinated intuition (i.e., care) were attended to more often when it was upheld (within the dominantly prominent condition). Therefore, these findings may be better explained by the prominence of the protagonist's behavior rather than the extent to which the intuition was satisfied or thwarted. This leads to the third possibility.

It is possible that attention is affected differently by the upholding of care versus authority as the superordinate intuition. This contention is in line with logic suggesting that having care as the subordinated intuition created conditions that led to expectancy violations for the participants. As discussed above, findings here might suggest that upholding care after making respect the superordinate intuition violated expectations. Perhaps this violation, in itself, made care more prominent than this study anticipated.

Thus, when care was upheld (and authority violated), this expectancy violation made care more salient and drove attention away from cues exemplifying respect (i.e., "Respect your Leaders"). Accordingly, instead of establishing that upholding authority increased attention to respect-related cues, these findings might indicate that upholding care decreased attention to respect-related cues. In other words, the increased prominence of care unexpectedly diverted attention away from information related to respect. In line with this interpretation, the findings show that audiences paid attention to cues exemplifying care (i.e., "Kindness") more frequently under conditions where this expectancy violation should have been strongest—that being when

the protagonist upheld care, even though respect was made dominantly prominent. Although this interpretation is plausible, additional research is needed to build confidence in it. Future work should directly test whether expectancy violations make an intuition more or less prominent and through this shape subsequent attention to intuition-related cues in narratives.

Beyond this discussion of attentional patterns suggesting the interaction of behavior and C-NIEP can create expectancy violations, findings in this study showed another surprising attentional outcome. Attention to the superordinate intuition moderated the effect of behavior on approbation in an unexpected direction. Specifically, the effect of behavior (upholding vs. violating the superordinate intuition) on approbation was weakened when participants paid more attention to cues exemplifying the superordinate intuition (i.e., “Respect you Leaders”).

It is difficult to assess why this occurred. Though speculative, extended attention to “Respect your Leaders” might indicate increased rumination, which in turn allowed participants to deliberately weigh whether the protagonist’s decision to uphold authority at the cost of violating care was right or wrong. In turn, if most participants routinely value upholding care more than authority, this rumination would weaken the effect of upholding authority on approbation. Nevertheless, more research is needed to explore whether this observed pattern is consistent across studies.

### ***Can C-NIEP Alter the Speed with which Character Behavior Affects Disposition Formation?***

The outcomes in this study were generally in line with predictions that C-NIEP can alter the speed with which character behavior affects disposition formation. Specifically, the findings show that audiences responded approximately 200 ms quicker during evaluation of character liking when C-NIEP made respect dominantly prominent compared to when C-NIEP made respect overridingly prominent.

This is consistent with the NEAR's (Tamborini, Grady et al., 2021) predictions and previous research (Lewis et al., 2014; Kryston, 2021) suggesting that dominant versus overriding prominence can influence which processing route is used during appraisal. Accordingly, when the superordinate intuition is made dominantly prominent, sole attention is given to that intuition, which leads to fast and automatic appraisals. By comparison, when the superordinate intuition is made overridingly prominent to a conflicting intuition, attention is dispersed between the two intuitions, which led to slower and more deliberative appraisals. Observing these outcomes offers evidence that dual-process mechanisms underlie affective disposition formation, and that the comparative prominence of moral exemplars in conflict determines whether affective dispositions are formed intuitively or deliberative.

At the same time, evidence showing that audience response speed during approbation differed between the dominant and overriding C-NIEP conditions was not observed. One likely reason for the absence of this evidence is procedural. Specifically, since the mean and standard error for the measure of approbation ( $M = 1,891.58$  ms,  $SE = .068$ ) were larger compared to those measures for story liking ( $M = 1,364.44$  ms,  $SE = .042$ ), it is suspected that there was more start up error in the approbation measure. This increased error would have attenuated the ability to detect expected differences. Nevertheless, the general support observed for response-time hypotheses furthers evidence that dual-process mechanisms underlie disposition formation and increases confidence in the MADM's addition to ADT.

## **Implications**

The results of this investigation have theoretical implications for entertainment scholars and practical implications for social life. For entertainment scholars, the findings offer insight into features that shape story liking and the mechanisms that govern the influence of those



features. Beyond entertainment, the findings have social implications regarding the role of moral exemplar prominence in an audience's moral development. Both are discussed here.

### ***Theoretical Implications***

Affective disposition theory of drama is deceptively simple. This study focuses on two main features of the theory's simple logic. First, audiences like stories where liked characters are rewarded and disliked characters are punished. Second, the likability of characters is predicated on their morality. While these basic tenants are robustly supported in entertainment research, scholars have identified the need to clarify the underlying mechanisms that explain ADT processes (e.g., Lee & Shapiro, 2014; Sanders, 2010; Tamborini et al., 2018) and determine whether ADT can explain the appeal of all kinds of narratives (Raney, 2004). Specifically, some have wondered if the theory's basic premise applies to the enjoyment of morally complex narratives and characters (Raney & Janicke, 2013).

To address these questions, the MADM applied a social intuitionist perspective to identify mechanisms that underlie ADT processes. Importantly, the MADM's explication suggests testable hypotheses predicting when audiences will approve or disapprove actions taken by characters in morally complex storylines. These predictions identify specific content features that increase and decrease approbation. This investigation began to test some of these predictions by varying content features within a narrative predicted to shape approval of behavior wherein the protagonist's effort to uphold one moral intuition comes at the cost of violating another. Support found for some of the MADM-based mechanisms has several implications for entertainment scholars who study the appeal of narratives and their characters.

**The Moderating Impact of AIS and Attention on ADT Processes.** To explain the appeal of morally complex characters, Raney and Janicke (2013) suggested that entertainment

can “provide us a vantage point from which to see the rules and expectations that prevail in narratives [that] are different from those in the real world” (p. 163). As such, they suggest that narratives may use cues to set alternative moral standards that audiences can use to evaluate characters—standards that differ from those used in everyday life.

Logic underlying the MADM is consistent with Raney and Janicke’s proposition that narratives can use cues to shape audiences’ evaluations of characters. However, the MADM differs in its account of how these cues shape moral judgment. Instead of altering one’s moral standard, the MADM suggests that narrative cues can strengthen or weaken the salience of innate moral intuitions, which then shapes attention to information that exemplifies those intuitions. As such, in shaping disposition formation, stories do not alter internal standards suggesting that acts upholding these intuitions are moral and acts violating them are immoral.

Beyond simply stating that narrative cues shape moral judgment by strengthening/weakening intuition salience, the MADM identifies the type of narrative cues used to shape moral judgment and how they strengthen/weaken salience through C-NIEP. C-NIEP relies on previous MIME research suggesting that moral-intuition exemplars can make moral intuitions salient in audiences’ minds (e.g., Tamborini, Prabhu et al., 2016). The current study builds on this research to demonstrate that intuition accessibility is influenced not only by the mere presence of intuition exemplars, but also by their comparative prominence in narrative content, which in turn can shape appraisal. As such, this study provides initial evidence that narratives can use the prominence of moral intuition exemplars to shape the appeal of morally complex characters and stories.

**Intuitive and Deliberative Processes that Govern Dispositions.** In addition to examining the effect of exemplar prominence, the present investigation shows support for the

NEAR (Tamborini, Grady et al., 2021). While several models utilize a dual-process rationale of information processing (Bargh, 1989; Evans, 2008; Evans & Stanovich, 2013) to describe how audiences process media content generally (Petty & Cacioppo, 1986) and narratives specifically (Slater & Rouner, 2002; Schneider et al., 2021), the NEAR describes how intuitive motivations prompt audiences to evaluate stories automatically or deliberately. Specifically, the NEAR suggests that while audience appraisals will be deliberative and slow when audiences sense that salient intuitions are in conflict, they will be automatic and quicker when conflict is not apparent.

While a dual-processing approach to the moral judgment of narrative characters is not new (Tamborini, 2011, 2013), this investigation may be the first to directly test and show evidence of how this process affects the disposition formation process. Moreover, in the light of the larger literature on narrative enjoyment and appreciation (e.g., Oliver & Bartsch, 2010), the findings of this investigation begin to outline conditions in which characters may be enjoyed versus appreciated. While the current study did not observe differences in story enjoyment and appreciation between conditions of the C-NIEP manipulation (see Appendix D), other research has found a correlation between moral rumination and story appreciation (e.g., Eden et al., 2017). As such, if an audience senses that a character's behavior causes conflict between salient intuitions, the slower and more deliberate rumination expected should be associated with character appreciation, while the faster judgments expected when no conflict is perceived should be more strongly associated with character enjoyment.

The MADM provides specific predictions for when audiences should enjoy versus appreciate characters (as well as a narrative overall) based on the types of intuitions (i.e., altruistic or egoistic) that are in conflict. In this regard, altruistic denotes an intuitive drive to benefit others, whereas egoistic denotes an intuitive drive to benefit self. The MADM is built on

logic suggesting that altruistic (i.e., moral) intuitions play a stronger role in shaping dispositions toward characters, while egoistic intuitions are more important in shaping dispositions toward stories overall. Character enjoyment or appreciation are largely determined by whether the character upholds altruistic intuitions that are dominantly or overridingly salient. Character enjoyment (a purely positive disposition) stems from character behavior upholding altruistic intuitions that are made dominantly salient in the narrative, while character appreciation (a mixed, but mostly positive disposition) stems from behavior upholding those intuitions that are made overridingly salient while violating intuitions that are salient but subordinate.

By comparison, story enjoyment or appreciation is predicated on whether outcomes befalling a liked character satisfy a dominantly or overridingly salient egoistic need. Paralleling disposition formation for characters, story enjoyment stems from outcomes that satisfy those egoistic intuitions that are dominantly salient to the character, while story appreciation results when outcomes satisfy egoistic intuitions that are overridingly salient to the character while thwarting those that are salient but subordinate. The present investigation begins to demonstrate this distinction in part by showing that the C-NIEP degree (dominant versus overriding) of two altruistic intuitions (respect and care) can affect disposition formation (i.e., character liking).

In sum, the findings of this study provide a path for entertainment research to better understand how narrative cues in different types of stories can shape affective dispositions through the same underlying processes. For instance, C-NIEP in an action movie might make fairness dominantly salient over the violation of care. This, in turn, may allow audiences to enjoy a protagonist fighting against injustice even if the character is violent towards his adversary.<sup>8</sup> By comparison, C-NIEP in a television drama might make loyalty overridingly salient over fairness. Then, if a protagonist lies in a court of law to protect a loved one, audiences might only

appreciate the protagonist. They might side with the protagonist but not hold the character in highest regard, since lying in court should remain salient, even if subordinated, making the immoral act hard to ignore. While some might think that different cognitive strategies are needed to process and appraise such different stories, the mechanisms outlined by the MADM can account for reactions to both. Thus, the MADM offers predictive utility across a range of narrative forms. Moreover, it can be empirically tested with these different types of narratives in future research.

### ***Social Implications***

What moral lessons do audiences learn from stories and how are these lessons modeled in everyday life? For many years, media effect scholars and social critics have shown interest in a narrative's potential for the prosocial influence on attitudes and behaviors and concern for its potential antisocial effects in areas such as desensitization and aggression (see Eden et al., 2013). While the current study does not test these particular occurrences, the processes described by ADT and the MADM can explain them. For instance, social cognitive theory (Bandura, 1986) would argue that audiences may model the moral and immoral values that are performed by likable characters and sanctioned by narrative outcomes. The MADM provides a scheme to define what these values are, show how they are represented in stories, and describe how narratives sanctioned them (see also Tamborini, Aley et al., 2021; Tamborini et al., 2022).

In layman's terms, the MADM outlines how narrative cues are used to communicate the importance of different moral values (i.e., moral intuitions). Narrative cues can direct audience attention to the values that are important, emphasize which values are more important than others, and indicate the circumstances that can alter this value hierarchy. In particular, the

MADM (and similar models like the MIME; Tamborini, 2013) tell us what actions or entities epitomize those values through the creation of moral exemplars.

Some research suggests that an individual's attitude towards an attitude object is determined by the object's relation to accessible moral intuitions (Clifford, 2014). For example, people who are more sensitive to care are more likely to oppose the death penalty while those more sensitive to respect for authority are more likely to support it. In other words, some objects can become moral exemplars that represent upholding or violating different intuition domains.

Research suggests that narratives can turn an action or entity into a moral exemplar that represents a specific domain (Tamborini, Goble et al., 2019). For example, news stories from different outlets may present a border wall between two nations as an exemplar of law and order (i.e., respect for authority) or as an exemplar of cruelty (i.e., care). Applied to narrative entertainment, fictional stories may highlight the association between a character and behaviors that uphold or violate an intuition (Grizzard et al., 2018). This is especially apparent in entertainment for children. For example, in the *Toy Story* series, much of the dialog between characters highlights the importance of upholding loyalty, making it the key motivation for the protagonists' actions. In this manner, narratives teach moral lessons to audiences by creating moral exemplars and emphasizing them in content.

The current study also demonstrated that not only can a moral intuition's exemplars shape audience attitudes, but its comparative prominence against another intuition's exemplars can shape audience appraisals. Notably, this comparative prominence may have important socializing effects. Tamborini, Grady et al. (2021) argued that conflict between prominent intuition exemplars may serve an enlightenment function for audiences. Put simply, emphasizing which intuitions are more important than others in a story by varying C-NIEP may allow audience

members to consider each intuition's relative importance in real life. For instance, in later iterations of the *Toy Story* series, the importance of upholding loyalty is directly compared to the satisfaction of autonomy (i.e., is loyalty more or less important than autonomy?). By making one moral-intuition exemplar's prominence superordinate to the other, a story can teach audiences the conditions under which upholding one intuition should be prioritized over another.

At the same time, however, C-NIEP may occasionally promote admiration for characters that sometimes do bad things. C-NIEP's ability to minimize the salience of subordinated intuitions, especially those that are violated, may allow audiences to overlook or devalue morally inappropriate behaviors and the fact that the character performed them.

If this is the case, concern about the socializing effect of such narratives should not be overlooked. If the protagonist uses violence to restore justice, does this teach audiences that it is okay to violate care in pursuance of upholding fairness, and would this lesson be applied to real-world attitudes and behaviors? For example, if audiences regularly see fairness override care in narratives, would they more likely support real-life actors who use violence while protesting to pursue a just cause? These questions remain unanswered.

## **Limitations**

When contemplating the findings presented in this dissertation, several limitations should be considered. First, while intuitions are described to be preconscious in nature (Haidt & Joseph, 2007), we measured audience intuition salience using unprompted open-ended questions and the character MFQ, both of which are post-conscious level measures. Other MIME research has developed implicit measures, including the moral foundations-affective misattribution procedure (MF-AMP; Tamborini, Prabhu et al., 2016) and moral foundations-lexical decision task (MF-

LDT; Tamborini, Baldwin et al., 2020) to measure audience intuition salience. As such, further research should reexamine C-NIEP's influence using these types of implicit measures.

Second, the eye gaze measures for the graffiti wall phrases "Kindness" and "Respect your Leaders" was captured after the protagonist decides to either uphold authority or care. Some work has suggested that an audience's motivation to attend to moral information differs according to whether the intuition is accessible but not satiated versus accessible and satiated (Gantman & Van Bavel, 2016). Specifically, this research suggests that top-down attention to salient intuition-related cues may be higher before a character upholds that intuition. Thus, measuring gaze after the protagonist declared which intuition he would uphold may have reduced the ability to observe C-NIEP's influence on attention to salient intuition-related cues. Therefore, future research should measure participants' eye gaze to salient-intuition related cues before the protagonist upholds or violates the intuition.

Third, the intercoder reliabilities for coding the presence of respect and care in the open-ended responses for both studies were lower than what is recommended for best practice (Riffe et al., 2019). A reduction of intercoder reliability for indices like Krippendorff's alpha score is common when nominal data is heavily skewed (Zhao, 2011), and it is recommended to report alternative measures of intercoder reliability as is done in this research. Nevertheless, a reduction in intercoder reliability should attenuate the ability to see expected effects from manipulations. Additional work is needed to improve the coding protocol used in this research (Hahn et al., 2017; 2019; Tamborini et al., 2017) and increase coder reliability for future research.

Finally, in the reaction time task, the lack of a buffer task between the presentation of the stimulus behaviors and the measure of these behaviors' approbation made it difficult to control for start time error. This may have increased random error in reaction-time measures and



attenuated any effect of C-NIEP on speed of approbation. Therefore, future research replicating this protocol should include a buffer statement to account for start-up error.

## **Conclusion**

The appeal of narrative entertainment is predicated on our ability to like some characters and dislike others, or at minimum to root for some and against others. ADT suggests that moral conflict can play an important role in these disposition formations. For many, if not most stories, moral conflict emerges through the opposing value positions upheld by the protagonist and antagonist (Hopp et al., 2020), which can be used to strengthen positive and negative dispositions toward these characters (Tamborini, Grady et al., 2020). By comparison, many characters are faced with internal moral conflicts where opposing values come into play. MADM suggests that when this happens, many stories use narrative cues to signify to audiences which values are most important and how much each should be weighed when dispositions are formed.

The present investigation offers evidence from a laboratory setting supporting MADM's description of how the comparative prominence of intuition exemplars in a narrative can shape disposition formation. Future research may want to conduct content analyses to explore how frequently comparative intuition exemplar prominence is utilized in narratives. Moreover, whereas the present investigation used a comic book stimulus with a superhero protagonist, replication using narratives with different genres and character archetypes is warranted. For instance, would the patterns observed in this research replicate if the protagonist was portrayed as an antihero or morally ambiguous? Would they replicate if the genre was comedic? Despite the need for future research, taken as a whole, this investigation continues to add to the collective understanding of entertainment theory by identifying conditions that allow narrative entertainment to bring us great joy.

## ENDNOTES

<sup>1</sup> Beyond those components that are relevant to the current study, the MIME (Tamborini, 2011, 2013) offers an expansive description of the short-term and long-term processes that govern the effects of exposure to moral-intuition exemplars in media content. Specifically, in the short-term, the model details how media exposure to moral-intuition exemplars can influence the salience of related intuitions, content appraisal, and subsequent selective exposure to content. In the long-term, the MIME describes how aggregate selection of content emphasizing specific intuition-exemplar domains can shape the production of similar content by creators. The present investigation examines components of the MIME's short-term processes as applied to the MADM.

<sup>2</sup> In one exception of research that examined attention and ADT processes, Callen et al. (2012) demonstrated that audiences will attend to just outcomes based on a character's morality. Specifically, audiences will fixate on potential outcomes that offer reward when a character is moral and punishment when a character is immoral. This epitomizes the anticipation/apprehension stage of ADT, where audiences hope for rewarding outcomes for liked characters and punishing outcomes for disliked characters. However, this area of ADT is not the focus of the present investigation.

<sup>3</sup> To ensure participants completely described the events of the story, four follow-up questions were given asking participants, if they have not done so already, to describe what individual characters said and did in the story. The coding for these four questions along with the first

general question were collapsed such that any mention of care or respect in any question was coded as 1 and no mentions across these questions were coded as 0.

<sup>4</sup> One item, “In the story, Static seems like he would ... cause chaos or disorder.”, was removed from the respect for authority subscale in the Character MFQ in both the Study 1 and 2 to increase the scale’s reliability.

<sup>5</sup> The coded-AIS scores for respect and care were mean scores comprised of participants answers to three open-ended questions. The presence of the intuition was coded as 1 in each response. Responses for each question were summed for each participant. Thus, responses could vary from 0 to 3. These scores were divided by 3 to create an average score for each participant. These scores were averaged across participants within each condition for use in analyses. They are identified in the manuscript as coded-AIS scores.

The first question asked participants to describe the events that occurred and people involved in the story. The second question asked why the protagonist, Static, did the things he did in the story. The last question asked participants whether Static did the right or wrong thing and why they thought so. Responses to these questions were taken to indicate the salience of the referenced intuition. Under the assumption that responses to Question 1 was the purest indicator of the referenced intuition’s salience, the analyses reported in the manuscript were replicated using only participants’ coded responses to Question 1. Results of these analyses replicated the findings reported in the manuscript. The findings are reported here.

First, participants in the dominantly prominent condition mentioned respect for authority ( $M = .53, SD = .50$ ) more than those in the overridingly prominent condition ( $M = .44, SD = .50$ ), however, matching AIS findings reported in the manuscript, this difference was insignificant,

$t(112) = -0.943, p = .348, \text{Cohen's } d = -.177$ . Second, participants in the overridingly prominent condition mentioned care ( $M = .61, SD = .49$ ) significantly more than those in the dominantly prominent condition ( $M = .40, SD = .49$ ),  $t(112) = 2.282, p = .024, \text{Cohen's } d = .427$ . Once again, this outcome matched the AIS findings reported in the manuscript.

<sup>6</sup> Though not part of this proposal, Imotions will be used also to mark words related to the superordinate and subordinate intuitions in other panels as areas of interest. This will be done for exploratory purposes.

<sup>7</sup> The two responses to the first practice task were not collapsed into a practice reaction-time measure due to the presence of large outliers that, when capped at three standard deviations above the mean, still skew the data positively. This indicated that these practices had high startup error.

<sup>8</sup> Of note here, though not examined in this investigation, action movies might also provide a good example of how the C-NIEP of egoistic intuitions is integrated in the MADM. In this case, the C-NIEP of the protagonist's competence or safety needs would play a critical role. Satisfaction of the protagonists' egoistic intuition would determine enjoyment or appreciation. Audience enjoyment should result when the egoistic intuition satisfied was made dominantly salient, while appreciation should result when the egoistic intuition satisfied was made overriding.

## **APPENDICES**

## APPENDIX A: Stimuli Transcript

### Page 1

**PANEL 1 (Caption):** The star of this story is Static, a young hero who was born with the power to generate electricity. Static wants to make his home (Capitol City) a better place, and does this by stopping villains from causing mayhem in his beloved hometown.

**PANEL 2 (Caption):** Static's archenemy is Pyre. No one knows much about Pyre or where he came from, but he has been causing trouble in Capitol City. Pyre likes to start devastating fires to distract the local police while he robs banks and steals other precious artifacts.

**PANEL 3 (Caption):** Static and Pyre are perpetual foes who have come head-to-head many times.

**PANEL 4 (Caption):** Static tries his best to stop villains like Pyre. He believes he was born to do good, and has great admiration for humanity.

### Page 2

**PANEL 1 (Caption):** Static is a beloved hero to people in Capital City, even though he mostly unknown to people outside of town. Yet, despite the admiration of local residents, Static is a loner when he isn't fighting crime. Quiet and isolated, he keeps to himself. At school he shies away from most kids, because he doesn't like the stress of high school drama.

**PANEL 2 (Caption):** The one exception to this is his best friend. Max is goofy, obnoxious and embarrassing, but Static puts up with him because he always has Static's back.

**PANEL 3 (Static):** Wait, you want to put ONION in your coffee? Dude, that's disgusting.

**PANEL 4 (Max):** Not 'want to'. . . *DID*. Live a little, okay. The world needs more creative flavor combos. I'm SURE this is going to be a big hit.

**PANEL 5 (Max):** Want to see how I made it? -Oh wait- don't you have to go to the police station soon?

**PANEL 6 (Static):** Yeah, in a few minutes. I have a meeting with Chief Roberts.

**PANEL 7 (Max):** Oh man, the big leagues. Good luck -ask them if they are interested in expanding the police coffee selection!

### Page 3

**PANEL 1 (Caption):** At the Police Station

**PANEL 2 (Roberts):** Heading down, Static?

**PANEL 3 (Roberts):** We've got a lead about Pyre's next target. Our detectives have informed me that Pyre hired The Runner to deliver the Aztec tablets that went missing last week. Those

artifacts are priceless.

**PANEL 4 (Static):** The Runner! How did he get involved in Pyre's mess!

**PANEL 5 (Roberts):** He's doing it to protect his brother. It's unfortunate, but stopping him is our only chance to stop Pyre from getting those tablets.

**PANEL 6 (Static):** I've crossed paths with The Runner before. He's incredibly determined . . . He won't go down easy.

**PANEL 7 (Roberts):** Do everything you can to stop Pyre and get the tablets. And I mean everything.

**PANEL 8 (Static):** I understand. I want to help.

#### **Page 4**

##### ***Dominantly Prominent Condition***

**PANEL 1 (Caption):** Later that evening

**PANEL 2 (Static):** Max, I can't stop thinking about those tablets. Remember learning about them in history class? Their discovery was one of the greatest archeological finds of the century. They're made of gold and laced with precious jewels. The writing on them solved some of the mysteries of Aztec culture.

**PANEL 3 (Static):** I know I can get the tablets back. I have *a lot* of confidence in Chief Roberts. I *really look up* to him. He is a *good* commanding officer who always tries to do what's *best* for the people in our city.

**PANEL 4 (Max):** Okay, I don't really see any problems. You should *always follow* Chief Robert's instructions. He's a *smart guy*. People in town *look up to him*, and he will always *steer you right*.

##### ***Overridingly Prominent Condition***

**PANEL 1 (Caption):** Later that evening

**PANEL 2 (Static):** Max, I can't stop thinking about those tablets. Remember learning about them in history class? Their discovery was one of the greatest archeological finds of the century. They're made of gold and laced with precious jewels. The writing on them solved some of the mysteries of Aztec culture.

**PANEL 3 (Static):** I know I can get the tablets back. It's tough to determine whether following Chief Roberts is more important than harming The Runner, but I know it is the right thing.

**PANEL 4 (Max):** Okay, I see your problem. It might feel wrong to harm The Runner. But it would be much worse to disregard Chief Roberts. He's a smart guy. He wouldn't tell you to take out The Runner if there was any other way to stop Pyre.

## Page 5

### *Dominantly Prominent Condition*

**PANEL 1 (Static):** Right, I've followed Chief Roberts for years- he's never steered me wrong. I would **never second guess** somebody I *admire* so much. He sees the big picture and tries to do *what's best* all around.

**PANEL 2 (Max):** Gotcha. Totally agree.

**PANEL 3 (Max):** If I were you, I'd call Roberts and explain that you will stop The Runner and finish the mission he gave you.

**PANEL 4 (Static):** Yeah, you're right. Listening to people in charge can be *more important than anything else*, especially when they are like Chief Roberts and always make *good decisions*.

### *Overridingly Prominent Condition*

**PANEL 1 (Static):** Right, I've followed Chief Roberts for years- he's never steered me wrong. He wouldn't tell me to use force on somebody who is vulnerable if it wasn't our only option. I shouldn't second guess somebody I admire. He sees the big picture.

**PANEL 2 (Max):** Gotcha. Totally agree.

**PANEL 3 (Max):** If I were you, I'd call Roberts and tell him you will stop The Runner and finish the mission he gave you, even if it requires tazing him.

**PANEL 4 (Static):** Yeah, you're right. Listening to people in charge is more important than hurting someone who is powerless.

## Page 6

**PANEL 1 (Caption):** A few days later

**PANEL 2 (Static):** There he is.

**PANEL 3 (Runner):** Out of my way!!

**PANEL 4 (Static):** I've gotta call Chief Roberts

**PANEL 5 (Static):** He needs to know I just spotted The Runner.

## Page 7

### *Violate Authority/Uphold Care Condition*

**PANEL 1 (Static):** Chief. It's Static. I've located The Runner.



**PANEL 2 (Static):** But I'm not going to hurt him. I just can't.

*Uphold Authority/Violate Care Condition*

**PANEL 1 (Static):** Chief. It's Static. I located The Runner.

**PANEL 2 (Static):** And I am going to stop him, like you said.

**Page 8 (Graffitied Wall)**

**PANEL 1 (Static):** This is ... the right thing to do.

**Page 9**

*Violate Authority/Uphold Care Condition*

**PANEL 1 (Caption):** Static knew that following Chief Robert's plan was the wrong thing to do given the circumstances.

**PANEL 2 (Caption):** He felt it in his gut.

*Uphold Authority/Violate Care Condition*

**PANEL 1 (Caption):** Static knew that following Chief Robert's plan was the right thing to do, no matter the circumstances.

**PANEL 2 (Caption):** He felt it in his gut.

**Page 10**

*Violate Authority/Uphold Care Condition*

**PANEL 1 (Static):** That's it. Enough of this. I'm outta here.

**PANEL 2 (Static):** Runner, stay safe.

**PANEL 3 (Static):** I'll find a way to get you out of this mess. You and your brother won't need to fear Pyre- we'll figure it out.

*Uphold Authority/Violate Care Condition*

**PANEL 1 (Static):** End of the road, Runner!

**PANEL 2 (Static):** Chief wants me to bring you in- there's no way around his orders.

**Page 11**

*Violate Authority/Uphold Care Condition*

**PANEL 1 (Caption):** Meanwhile, Chief Roberts and the police are searching the city for The Runner and the artifact

**PANEL 2 (Robert):** Keep searching!!

**PANEL 3 (Robert):** The Runner must be around here somewhere!!

**PANEL 4 (Caption):** But Static kept The Runner safe from harm.

**PANEL 5 (Caption):** Later, back at the hospital

**PANEL 6 (Brother):** Thanks for not zapping my brother.

**PANEL 7 (Static):** It's nothing. I know you two need each other. I couldn't get in the way of that.

*Uphold Authority/Violate Care Condition*

**PANEL 1 (Static):** Runner! Stop! You're under arrest!

**PANEL 2 (Runner):** AAAHHGG!!

**PANEL 3 (Caption):** Static followed Chief Robert's orders and retrieved the irreplaceable artifact, foiling Pyre's plan.

**PANEL 4 (Static):** I'm glad I listened to you, Chief. We probably would have lost the artifact for good if I hadn't.

**Page 12**

*Violate Authority/Uphold Care Condition*

**PANEL 1 (Caption):** Outside the hospital

**PANEL 2 (Max):** Are you good?

**PANEL 3 (Crowd):** You're okay with us Static.

**PANEL 4 (Caption):** Static didn't get back the Aztec artifact. But the citizens still appreciated him, even though they wanted him to stop The Runner like Chief Roberts said.

**PANEL 4 (Crowd):** Good try. Don't worry. Next time.

*Uphold Authority/Violate Care Condition*

**PANEL 1 (Caption):** Outside the police station

**PANEL 2 (Max):** Are you good?

**PANEL 3 (Crowd):** You're okay with us Static.

**PANEL 4 (Caption):** Static got back the Aztec artifact, and the citizens appreciated that. They were really glad he stopped The Runner like Chief Roberts said.

**PANEL 4 (Crowd):** Wow! Way to go! Great job!

## **APPENDIX B: Instructions and Measurements for Study 2**

### **Research ID**

Use your mother's maiden name and the day of your birth as your Research ID. For example, if your mother's maiden name is Jane Smith and your birthday is May 15, your Research ID is "Smith15". If you do not know your mother's maiden name, use her first name instead. We will use this to anonymously link your data from different studies throughout the semester. Enter your research ID below.

Please click on ">>" once you enter your Research ID.

### **Setup Instructions**

Thank you for taking the time to participate in this study. In line with MSU's policy, please keep your mask on at all time. The study you are about to participate in involves the use of eye tracking and voice recording at different points throughout the study.

For the first part of the study, you will be asked to read a comic story and answer questions about your thoughts on the story.

To begin, the research assistant will calibrate your eyes with the eye tracking camera. Please remain seated in a comfortable position throughout the study to ensure accurate tracking. Moving your head or body too much may interfere with the camera.

Please let the research assistant know when you are ready to begin the study by raising your hand.

### **Instructions 1**

For this study you will be given a comic to read and then you will answer some questions about your thoughts on it.

Please keep in mind that the comic you see is not highly polished. The quality limitations result both from the facts that (1) the development of this comic is still very much "in progress," and (2) the comic is targeted towards young adolescents (age 8-12).

The speed at which the pages in the comic are flipped is automatic. The pages will be flipped approximately every 15 seconds, though some pages will be up a little bit longer if there is more text. Please, read the text during these 15 second interludes.

After you read the comic, we will ask you some questions about it.

To answer these questions, you will perform a task in which you will be asked to choose the best answer between two different options.

In order to prepare you for this, we want to practice the task before you read the comic.

Please click on ">>" once you are ready to begin the practice.

### **Practice Reaction Time**

In the following task, a symbol containing three asterisks (\*\*\*) will be briefly presented in the center of the screen. When the asterisks disappear, they will be replaced by a statement that can be completed in one of two ways. Two choices for completing the sentence will appear on the left and right sides of the screen. Your task is to choose the best answer.

If you agree with the choice on the right side of the screen, press the right arrow key.

If you agree with the choice on the left side of the screen, press the left arrow key.

Please keep your pointer finger on the left arrow key and your index figure on the right arrow key.

Try to give your answer AS SOON AS YOU CAN after seeing the statement without giving it too much thought.

Michigan State University is \_\_\_\_\_  
[in East Lansing, in Ann Arbor]  
[A public university, A private university]

Life at MSU is \_\_\_\_\_  
[Fast paced, Slow paced]  
[Active, Passive]

MSU classes are \_\_\_\_\_  
[Conventional, Unconventional]  
[Exciting, Boring]

**[Exposure to one of four randomized experimental stimulus conditions]**

### **Instructions for Moral Approbation and Character Liking (Reaction Time)**

As we said we would, we want to ask some questions about the comic.

You will perform the same task you performed earlier.

Keep your pointer finger on the left arrow key and your index figure on the right arrow key.

When the asterisks disappear, pick one of the two choices to complete the sentence that appears.

There are no right or wrong answers. We just want to know your gut feeling. Try to give your answer AS SOON AS YOU CAN without giving it too much thought.

Static's decision about the Runner was \_\_\_\_\_  
[Moral, Immoral]  
[Right, Wrong]

Static is somebody I would \_\_\_\_\_  
[Like, Dislike]  
[Root for, Root against]

### **Moral Intuition Salience (Voice Recording)**

We would now like you to tell us what the story in the comic was about. Before each question, please press the [record] button and answer the question out loud into the microphone. When you are finished, press the [stop] button. Then click on ">>" to continue to the next question, and press the [record] button again to answer. Repeat this process for each question.

When your answer, please tell us as much as you can.

When you are ready click on ">>" to begin.

First, to the best of your ability, describe the events (in order) that occurred in the story. Who were the people involved and what did they say and do?

Just to make sure you didn't forget anybody, if you didn't tell us already, tell us what Static's friend Max said and did?

If you didn't tell us already, tell us what did Police Chief Robert say and do?

If you didn't tell us already, tell us what did The Runner say and do?

Finally, if you didn't tell us already, tell us what did Static say and do?

Second, in your own words, tell us why Static did the things he did in the story.

Third, do you think Static did the right or wrong thing at the end of the story? Tell us why you think this is the case.

### **Enjoyment and Appreciation Scale**

Thank you for your participation thus far. We would now like to you to complete a questionnaire on the following pages. Please answer each question honestly, and remember that there are no right or wrong answers.

Please rate how much you either agree or disagree with the following statements.

[Strongly disagree – Strongly agree]

1. I liked this story.
2. It was fun for me to read this story.
3. I had a good time reading this story.
4. The story was entertaining.
5. I found this story to be very meaningful.
6. I was moved by this story.
7. The story was thought provoking.

### **Graffiti Words Recall**

In one of the panels of the comic you just read, Static was standing in front of walls covered in graffiti. Here is the panel. You will see that the graffiti that was written on the walls has been removed. We would like to know if you recall what words were written on the walls. Please write as many as you remember below.

### **Graffiti Words Recognition**

Did the word/phrase below appear in this panel during the story?

[Yes, No]

1. Kindness
2. Respect Your Leaders
3. Epic
4. Dope
5. Urban Icon
6. Power
7. Mario
8. Word
9. West Side
10. Funky
11. Boom
12. No entry
13. Muscle Magic
14. Armor
15. Central
16. Temptation
17. Capitalist Bling
18. Spoilers
19. East Side
20. Anger

### **Character Moral Foundations Questionnaire**

In the story Static seems like he would. . .

[Strongly disagree – Strongly agree]

1. cause someone to suffer emotionally.

2. be cruel.
3. murder someone.
4. physically hurt another person.
5. treat some people differently than others.
6. act unfairly.
7. deny others their rights.
8. treat people equally.
9. betray his group.
10. show a lack of loyalty.
11. be loyal to his friends.
12. be two-faced.
13. show a lack of respect for authority.
14. cause chaos or disorder.
15. disobey orders from a superior.
16. play by no one else's rules.
17. violate standards of purity and decency.
18. do something disgusting.
19. live a healthy lifestyle.
20. be a smoker.

### **Moral Approbation Scale**

On a scale from -3 (completely wrong) to +3 (completely right), to what extent were Static's actions in the story the right thing to do?

[-3 (completely wrong) – 3 (completely right)]

### **Character Liking Scale**

Please rate how much you either agree or disagree with the following statements.

[-3 (strongly disagree) – 3 (strongly agree)]

1. I like Static.
2. I would want to be friends with someone like Static.
3. I admire Static.
4. I think is Static is a good person.

### **Approbation of Specific Behaviors**

Please rate how much you either agree or disagree with the following statements.

[Strongly disagree – Strongly agree]

1. When Static kept The Runner safe [harmed the Runner], he did the right thing.
2. When Static obeyed [disobeyed] Chief Robert's instructions to stop The Runner, he did the right thing.



## **Attention, Participant, and Technical Checks**

What was Static trying to retrieve?

[A diamond, An artifact, A flash drive, A weapon]

Which of the following happened at the end of the story? Pick all that occurred in the story.

[Static electrocuted The Runner, Static followed Chief Robert's orders, Static kept The Runner safe, Static disobey Chief Robert's orders, Static gave his friend a high five, Static received a large reward]

To what extent do you think the story is consistent with the following values?

[Strongly disagree – Strongly agree]

3. Compassion for others
4. Fairness towards others
5. Loyalty towards others
6. Respect for social structure and traditions
7. Pursuing a noble lifestyle that prevents social contamination

Do you read any comic books regularly (i.e., about once a month or more)?

[Yes, No]

If yes, which titles?

Have you ever participated in this study before?

[Yes, No]

Have you ever participated in a study at MSU about the comic character Static before?

[Yes, No]

Have you ever heard of the character "Static" before this study?

[Yes, No]

Have you ever read a comic that had the same character, but he had a different name than "Static"?

[Yes, No]

Did you wear glasses during this study?

[Yes, they are not bifocals; Yes, they are bifocals; No]

Do you have an astigmatism in one or both eyes?

[Yes, No, I do not know]

Did you wear eye makeup during this study?

[Yes, No, I wore makeup to the lab, but removed it when I got here]

Did you have any technical issues during the study?

[Yes, No]

Please describe your technical issue.

I paid close attention while reading the comic

[Strongly agree – Strongly disagree]

I paid close attention to the questions I answered in this study.

[Strongly agree – Strongly disagree]

### **Demographics**

What is your age?

What is your gender?

[Male, Female, Non-binary/third gender, Prefer to self-describe, Prefer not to say]

What is your ethnicity?

[White, Black or African American, Hispanic, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, Other/ Multi-Racial, Prefer not to say]

What do you think the purpose of this study was?

**APPENDIX C: Regression Tables for PROCESS Models Reported**

**Table 8**

*Regressions Testing Model from Figure 7*

	<b>Path 1 Approbation</b>			<b>Path 2 Character Liking</b>			<b>Path 3 Story Liking</b>		
	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>p</i></b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>p</i></b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>p</i></b>
Intercept	-.281	.159	.080	.172	.111	.126	-.058	.148	.698
CNIEP Condition	.397	.167	.019	-.173	.120	.153	-.118	.160	.458
Behavior Condition	.130	.170	.448	-.199	.119	.097	.231	.158	.146
Respect AIS	-.149	.139	.285						
Respect AIS X Behavior Condition	-.041	.176	.815						
Approbation Character Liking				.735	.059	< .001	-.145	.113	.202
							.420	.111	< .001
	<b><i>R</i><sup>2</sup></b>	<b><i>F(df)</i></b>	<b><i>p</i></b>	<b><i>R</i><sup>2</sup></b>	<b><i>F(df)</i></b>	<b><i>p</i></b>	<b><i>R</i><sup>2</sup></b>	<b><i>F(df)</i></b>	<b><i>p</i></b>
	.070	2.63	.037	.528	52.56	< .001	.128	5.16	< .001
		(4, 140)			(3, 141)			(4, 140)	

**Table 9**

*Regressions Testing Model from Figure 8*

	<b>Path 1 Approbation</b>			<b>Path 2 Character Liking</b>			<b>Path 3 Story Liking</b>		
	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>p</i></b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>p</i></b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>p</i></b>
Intercept	-.352	.182	.055	.172	.111	.126	-.058	.148	.698
CNIEP Condition	.343	.171	.046	-.173	.120	.153	-.118	.160	.458
Behavior Condition	.057	.200	.777	-.199	.119	.097	.231	.158	.146
Care AIS	.222	.145	.128						
Care AIS X Behavior Condition	-.510	.194	.010						
Approbation Character Liking				.735	.059	< .001	-.145	.113	.202
							.420	.111	< .001
	<b><i>R</i><sup>2</sup></b>	<b><i>F(df)</i></b>	<b><i>p</i></b>	<b><i>R</i><sup>2</sup></b>	<b><i>F(df)</i></b>	<b><i>p</i></b>	<b><i>R</i><sup>2</sup></b>	<b><i>F(df)</i></b>	<b><i>p</i></b>
	.088	3.37	.011	.528	52.56	< .001	.128	5.16	< .001
		(4, 140)			(3, 141)			(4, 140)	

**Table 10***Regressions Testing Model from Figure 12*

	Path 1 Approbation			Path 2 Character Liking			Path 3 Story Liking		
	<u>B</u>	<u>SE</u>	<u>p</u>	<u>B</u>	<u>SE</u>	<u>p</u>	<u>B</u>	<u>SE</u>	<u>p</u>
Intercept	-.255	.181	.161	.211	.130	.108	-.078	.162	.629
CNIEP Condition	.333	.195	.091	-.173	.144	.232	-.176	.177	.323
Behavior Condition	.266	.199	.185	-.309	.143	.033	.221	.179	.219
Fixation Length ("Respect your Leaders")	.195	.158	.220						
Fixation X Behavior Condition	-.401	.203	.051						
Approbation				.689	.068	< .001	-.246	.116	.036
Character Liking							.546	.117	< .001
	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>
	.070	2.08	.088	.483	34.49	< .001	.195	6.66	< .001
		(4, 110)			(3, 111)			(4, 110)	

**Table 11***Regressions Testing Model from Figure 13*

	Path 1 Approbation			Path 2 Character Liking			Path 3 Story Liking		
	<u>B</u>	<u>SE</u>	<u>p</u>	<u>B</u>	<u>SE</u>	<u>p</u>	<u>B</u>	<u>SE</u>	<u>p</u>
Intercept	-.275	.179	.127	.211	.130	.108	-.078	.162	.629
CNIEP Condition	.324	.196	.101	-.173	.144	.232	-.176	.177	.323
Behavior Condition	.266	.197	.180	-.309	.143	.033	.221	.179	.219
Fixation Count ("Respect your Leaders")	.151	.142	.290						
Fixation X Behavior Condition	-.335	.196	.091						
Approbation				.689	.068	< .001	-.246	.116	.036
Character Liking							.546	.117	< .001
	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>
	.061	1.78	.138	.483	34.49	< .001	.195	6.65	< .001
		(4, 110)			(3, 111)			(4, 110)	

**Table 12***Regressions Testing Model from Figure 14*

	Path 1 Approbation			Path 2 Character Liking			Path 3 Story Liking		
	<u>B</u>	<u>SE</u>	<u>p</u>	<u>B</u>	<u>SE</u>	<u>p</u>	<u>B</u>	<u>SE</u>	<u>p</u>
Intercept	-.173	.220	.432	.211	.130	.108	-.078	.162	.629
CNIEP Condition	.374	.201	.065	-.173	.144	.232	-.176	.177	.323
Behavior Condition	.183	.293	.533	-.309	.143	.033	.221	.179	.219
Fixation-Binary ("Kindness")	-.274	.283	.335						
Fixation X Behavior Condition	.176	.397	.657						
Approbation Character Liking				.689	.068	< .001	-.246	.116	.036
							.546	.117	< .001
	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>	<u>R<sup>2</sup></u>	<u>F(df)</u>	<u>p</u>
	.045	1.29	.279	.483	34.49	< .001	.195	6.65	< .001
		(4, 110)			(3, 111)			(4, 110)	

**APPENDIX D: Additional Analyses**

**Table 13**

*Means of Additional Measures*

Additional Measures Across Behavior (Uphold/Violate Respect and Care) and C-NIEP (Dominant/Overriding) Conditions				
	Up. Respect - Viol. Care		Viol. Respect - Up. Care	
	Dominant	Overriding	Dominant	Overriding
	<u><i>M (SE)</i></u>	<u><i>M (SE)</i></u>	<u><i>M (SE)</i></u>	<u><i>M (SE)</i></u>
Approbation (Scale)	2.13 (.20)	1.00 (.18)	1.43 (.19)	1.53 (.20)
Character Liking (Scale)	1.29 (.20)	0.71 (.18)	1.19 (.19)	1.40 (.20)
Story Liking (Scale)	4.60 (.24)	4.63 (.21)	4.24 (.23)	4.74 (.24)
Story Enjoyment (Scale)	4.62 (.22)	4.57 (.20)	4.20 (.22)	4.59 (.23)
Story Appreciation (Scale)	3.82 (.21)	3.82 (.19)	3.59 (.21)	4.02 (.22)
Approbation (Reaction Time Choice)	.95 (.08)	.47 (.07)	.85 (.08)	.91 (.08)
Character Liking (Reaction Time Choice)	.81 (.09)	.79 (.08)	.88 (.08)	.79 (.09)

*Note. Up. = Upheld; Viol. = Violated*

**Table 14***Effects of C- NIEP and Behavior on Additional Measures*

	Main Effects for C-NIEP		Main Effects for Behavior		Main and Interaction Effects of C- NIEP and Behavior on Additional Measures		
	Dominant	Overriding	Up. Respect Viol. Care	Viol. Respect Up. Care			
	<u>M (SE)</u>	<u>M (SE)</u>	<u>M (SE)</u>	<u>M (SE)</u>		<u>F (df)</u>	<u><math>\eta_p^2</math></u>
Approbation (Scale)	1.78	1.26	1.56	1.48	C-NIEP	6.95 (1, 165) **	.040
	(.14) <sup>A</sup>	(.14) <sup>B</sup>	(.13)	(.14)	Behavior	0.19 (1, 165)	.001
					Interaction	9.85 (1, 165) **	.056
Character Liking (Scale)	1.24	1.06	1.00	1.29	C-NIEP	0.94 (1, 165)	.006
	(.14)	(.13)	(.13)	(.14)	Behavior	2.25 (1, 165)	.013
					Interaction	4.30 (1, 165) *	.025
Story Liking (Scale)	4.42	4.69	4.62	4.49	C-NIEP	1.36 (1, 166)	.008
	(.17)	(.16)	(.16)	(.17)	Behavior	0.30 (1, 166)	.002
					Interaction	1.05 (1, 166)	.006
Story Enjoyment (Scale)	4.41	4.58	4.59	4.39	C-NIEP	0.62 (1, 166)	.004
	(.16)	(.15)	(.15)	(.16)	Behavior	0.83 (1, 166)	.005
					Interaction	1.05 (1, 166)	.006
Story Appreciation (Scale)	3.71	3.92	3.83	3.80	C-NIEP	1.03 (1, 166)	.006
	(.15)	(.14)	(.14)	(.15)	Behavior	0.02 (1, 166)	.000
					Interaction	1.14 (1, 166)	.007
Approbation (Reaction Time Choice)	.90	.69	.71	.88	C-NIEP	7.33 (1, 154) **	.045
	(.06) <sup>A</sup>	(.05) <sup>B</sup>	(.05) <sup>B</sup>	(.06) <sup>A</sup>	Behavior	5.12 (1, 154) *	.032
					Interaction	12.32 (1, 154) **	.074
Character Liking (Reaction Time Choice)	.84	.79	.80	.84	C-NIEP	0.39 (1, 154)	.003
	(.06)	(.06)	(.06)	(.06)	Behavior	0.18 (1, 154)	.001
					Interaction	0.12 (1, 154)	.001

\*  $p < .05$ , \*\*  $p < .01$ 

Note. Superscripts of different letters represents significant mean differences between conditions within C-NIEP or Behavior manipulation.

Up. = Upheld; Viol. = Violated

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