

Interpretations of blame regarding distinctive depictions of police killings

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1 Introduction

Media sources have proven to be an incredibly rich source of information, with the potential to influence the ways in which people understand events, and perceive morality and responsibility. As the role of the media in information spread is generally apparent, there has been an increase in metalinguistic awareness about the particular grammatical structures that sources often use when reporting on violent events. A chief example of such discussions revolves around the use of *bureaucratic voice* or *exonerative tense* (Balko, 2021), meaning the use of obfuscatory language. This grammatical tactic has been criticized heavily for being used to describe violent events, especially regarding depictions of police violence (Dickey, 2022; Kramer, 2020). An example of such linguistic constructions include the use nominalization in order to transform a violent action into an event with ambiguous semantic roles (‘man dies in officer-involved shooting’) (Moreno-Medina et al., 2022).

Journalists are often expected to maintain a neutral tone in reporting such events in order to limit negative judgements towards police departments and curtail stereotypes (Dukes & Gaither, 2017). As such, linguistic constructions such as passive voice and non-agentivity allow for them exclude certain details, in favor of tempering any sense of brutality or prominence of police activity (Entman, 2007; Ziems & Yang, 2021). However, as public consciousness grows, it is of empirical interest to interrogate whether or not these linguistic devices are effective in curtailing negative stereotypes towards police officers.

While there has been much work demonstrating how the use of particular syntactic structures influences how people interpret headlines and sentences generally (Fausey & Boroditsky, 2010), there is much less experimental work on the effect of obfuscatory language on people’s understanding of violent, police-related events. Considering the tumultuous relationship between the general public and police force that is marred by decades of reported mistreatment, heightened surveillance and brutality (Camp et al., 2021); possessing explicit attitudes towards police could be considered a ubiquitous human experience (Verhaeghen & Aikman, 2022). That being said, it is reasonable for

experimental work to consider the effect of participant priors on their interpretation of a highly-contested subject.

Moreover, work in criminal justice and social psychology has demonstrated that a person’s general perception of law enforcement has a strong influence on their assessment of interpersonal police encounters, regardless of whether the encounter was personally experienced (Brandl et al., 1994) or perceived in an experimental setting (Camp et al., 2021; Maguire et al., 2017). As global attitudes towards policing have presented a barrier to police departments attempting to form positive police-community relationships, empirical analyses on interpretations of police-related events should always assume an effect of participant priors, on processing.

Given the fact that humans process information from headlines by weighting and interpreting incoming evidence against previously existing information (Ecker et al., 2014), the present study seeks to investigate whether linguistic cues provide enough of an effect to mitigate the influence of prior attitudes on attribution. In order to examine the role of obfuscatory language and participant attitudes on blame assignment, I conducted a web-based study in which users’ were presented with headlines ranging in agentivity and semantic role and provided their own interpretations on whether or not a particular character was at fault. In the rest of this introduction, I present two main linguistic effects that were used to construct the experimental headlines. In Section 2, I report the present study, including the experimental design. After presenting the results and statistical analyses in Section 3, I move on in Section 4 to discuss the implications of the evaluated factors on attribution, and present future sites of inquiry.

1.1 Language of Obscurity

In the present study, participants were presented with constructed headlines of police-related events of varying grammatical constructions and varying semantic roles of the law enforcement officer. In each headline, a law enforcement officer was embroiled in a conflict with an individual, where either the officer or the individual served as the *agent* (deliberately performs the action) or *theme/patient* (often used interchangeably as they both undergo the action).

In this section, I describe two linguistic cues that describe the different headlines. The constructions have been identified to provide a level of semantic ambiguity, by scholars in fields such as criminology, sociology, economics, psychology and linguistics (Moreno-Medina et al., 2022; Toolan, 2013). I focus on three key types of narrative structures:

- Voice: the use of passive voice in lieu of active voice
- Semantic Role: the lack of a semantic agent

In Table 1, I provide examples of the two main linguistic factors, as I describe and employ them in my analysis. **Please note that the Non-Agentive examples in the table also utilize passive voice.**

Passive Voice A passive construction occurs when an object of an action becomes a promoted subject. In Table 1, an example of such a sentence is ”Protesters shot by officers outside Texas church

x	Police Agent	Police Patient
Linguistic Factor	Example	Example
Passive	Protesters shot by officers outside Texas church service	Officers shot by protesters outside Texas church service
Non-Agentive	Protesters shot during clash with officers outside Texas church service	Officers shot during clash with protesters outside Texas church service

Table 1: Examples of Obfuscatory Linguistic Factors

service.” In such a structure, the agent (officers) of an active sentence (Officers shot protesters outside Texas church service) is back-grounded and demoted, lowering its prominence to the reader. The terms *subject* (noun doing the action) and *object* (noun action is done to) refer to grammatical roles of a sentence. The grammatical subject of the sentence is now the noun receiving the action of the transitive verb.

Passive voice is regularly scorned, given its perception of being evasive and indirect. It is regularly discouraged from use, especially in regards to academic and scientific writing. For example, the APA publication manual clearly recommends writers to use active voice in order to create clear and direct sentences (Association, 2020; Ferreira, 2021). Moreover, although the function of the passive construction is to foreground the object, there is evidence that its use leads to obfuscation.

In an experiment where participants watched a video depicting a sexual assault and were asked to write about it, participants tended to use passive grammatical structures more frequently when describing the perpetrator’s actions during the rape itself (Bohner, 2001). Participants who used more passive constructions reported to perceive the incident as “less severe” and “ascribed more responsibility to the victim.”

Agentivity Agentivity refers to whether or not the agent is included in the sentence. In their 2010 study, experimenters Fausey & Boroditsky presented evidence for how non-agentive linguistic framing may influence a reader’s perception of an event. In focusing on the linguistic contrast between transitive agentive descriptions involving an agent and inanimate object (“Mrs. Smith followed her friends and as she stood up, she flopped her napkin on the centerpiece candle”) and intransitive nonagentive descriptions (“Mrs. Smith followed her friends and as she stood up, her napkin flopped on the centerpiece candle”), they found that agentive depictions led participants to assign more blame and 30%–50% more in requested financial damages.

Variation in agentivity can also be achieved through the use of other grammatical structures, notably passive voice and nominalization (Pinelli & Zanchi, 2021). In the Non-Agentive sentence from Table 1, “Protesters shot during clash with officers outside Texas church service”, although both verbs are transitive, the people responsible for the shooting (the officers), are not linked directly to the agent, and are instead made a constituent of the *clash*, leaving some ambiguity about who was responsible. In contrast, the purely passive construction counterpart sentence, “Protesters shot by officers outside Texas church service,” clearly identifies the agent with the “by” phrase.

Linguistic Factors in Analysis As I will detail in the following section, the linguistic contrast of focus is between Passive Nonagentive headlines and Active Agentive headlines. This contrast was delineated in order to maintain standard use of the main transitive verb (shot) across all headlines. Please note that my later references to the labels *Agentive* and *NonAgentive* only refers to present study’s version, which includes Passivity. It does not strictly refer to previous conceptualizations of Agentivity in previous studies.

For the current study, I have identified four different hypotheses for each independent variable, and their interactions:

- H1 (Agentivity): Removing the mention of an explicit agent reduces perceptions of responsibility and blame, for the agent
- H2 (Agent Identity): The agent will be assigned more blame and responsibility for the event, regardless of status as law enforcement officer or not
- H3 (Participant Priors): Participants with a negative bias towards law enforcement would assign more blame and responsibility towards the officer, in all contexts
- H4 (Interaction): Participants with negative attitudes towards law enforcement would assign the **most** blame and responsibility, than any other population, in the following situation (Agent = Officer; Grammar = Agentive)

2 The Present Study

The experiment was distributed in June 2023 via Prolific. My hypotheses and research and analysis design were registered on the OSF registry (<https://doi.org/10.17605/OSF.IO/NJCBS>).

2.1 Materials and Methods

The experiment was developed using JsPsych (de Leeuw, 2015), making use of JavaScript, HTML, and CSS for implementing the study’s functionalities.

Participants Participants were required to reside in the United States and to be adults fluent in English. 128 Prolific users completed the survey and paid \$1.50 upon completion.

Stimuli The stimuli included 16 different headline topics, 8 of which were Target or Control headlines. Table 2 provides an example of Control and Target sentences for a given topic.

All Target sentences depicted a violent, police-related event, in which an individual was shot and killed. For each Target headline, there were four different versions of the same headline that ranged in Agentivity (Agentive vs Nonagentive) and identity of the agent (law enforcement officer vs person).

The Control sentences depicted a range of violent events that did not involve a law enforcement officer as one of the main semantic roles. Each Control headline had two different versions that solely ranged in Agentivity. As such, there were 48 different headlines that a participant could view.

Table 2: Examples Stimuli

	Control	Target	
		Police Agent	Police Patient
Agentive	Father beats drunk driver after Cobb County crash	Jacksonville police officer fatally shoots man during confrontation	Jacksonville man fatally shoots police officer during confrontation
Nonagentive	Drunk driver beaten after Cobb County crash with father	Jacksonville man fatally shot during confrontation with police officer	Jacksonville police officer fatally shot during confrontation with man

All Agentive Headlines involved an active sentence construction with a clearly defined agent. All Nonagentive headlines involved a passive sentence construction with an agent that was obscured by pairing the individual with a preposition (with, during or after) that referred to a hostile situation that is implied to have either lead to the violent action.

2.1.1 Experimental Design

Procedure On each trial, participants read a headline about a violent event. All participants saw at least one of the 16 topics once, but were randomly assigned to variations in how it was described, using a 2 X 2 design. The first level of randomization was for narrative structure. Participants were randomized to one of four structures: (1) Agentive, (2) Non-Agentive. The second level of randomization determined whether the agent was the law enforcement officer, or the other individual in the headline. Participants were then asked the following attention check questions:

- 'Who was harmed?'
- 'Who caused the harm?'

Each question was presented with an choice to select either the patient or the agent of the sentence. Participants also had the option to designate another individual. The main experimental question would be presented on the following screen, where a likert table displayed the questions: 'Who is to blame for the harmful event?' and 'Who is responsible for the harmful event?'. For these two questions, Participants could identify the appropriate level of attribution according to the following 1-5 scale: ("Only the (Agent1)", "Mostly the (Agent1)", "Both the (Agent1) and (Agent2) equally", "Mostly the (Agent2)", and "Only the (Agent2)". For the Target headlines, the Law Enforcement Officer was always designated as Agent1, and would therefore correspond to the lower values.

Although participants were given the option to assign both Blame and Responsibility to the different social actors, the various visualizations and regression analyses did not appear to demonstrate a much different effect between the two attribution scores. As such, the current paper only

relates the various predictor variables to Blame¹, as the analysis of Responsibility assignments did not appear to provide any new information to the overall point. In future analyses and papers, the effect on Responsibility will be considered and discussed at length.

Once participants completed the experimental questions, they were then prompted to a demographic survey. In addition to filling out general information related to gender, age, race, as well as their political leanings. Importantly, they also completed the following yes/no questions inquiring about their global views on policing, general trust and confidence in law enforcement (Camp et al., 2021; Maguire et al., 2017):

- Do you generally trust the police?
- Do the police usually listen to people’s views before making a decision?
- Do the police respect a person’s basic rights?
- Do you think that the police are generally honest?

3 Results

3.1 Agent Identity and Agentivity

3.1.1 Agent Identity

Figure 1 shows the mean blame assignments by agent identity².

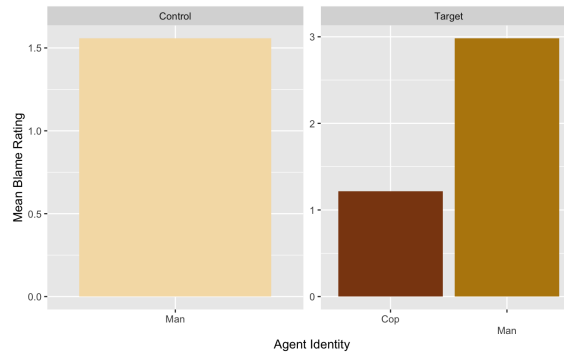


Figure 1: Mean Blame Ratings grouped by Agent Identity

Generally, the Control trials appeared to yield lower mean Blame values, but given the fact that the Control headlines did not involve a cop vs non-cop interaction, the numerical values do not correspond to a blamed individual. As such, although the two trial types are presented together, the present analysis is only focused on distinguishing within the individual Target trial effects. The mean Blame rating for the Control trials are still included for visualization purposes. When focusing

¹Given the fact that the current paper is limited to 4000 words, I chose to focus on the regression relationships to blame, in greater detail

²For all plots describing any effect of agent identity, all non-law enforcement agents (protesters, fisherman, teacher, etc.) were coded as "Man" for the various visualizations and regression models.

on the Target trials, headlines involving a Cop agent led to lower Blame scores, whereas headlines involving a Non-Cop agent led to higher Blame scores. However, this effect is expected, given the role of the agent. To reiterate, the perception of Blame was presented on a likert scale (1= Cop is fully to blame, 5 = Non-Cop is fully to blame). The visualization demonstrates that the identity of the agent has a high effect in how Blame is assigned.

3.1.2 Agentivity

Figure 2 shows the mean blame assignments by agentivity. Generally, the Control trials appeared to yield lower mean Blame values than Target trials, but as referenced previously, the present analysis is only focused on distinguishing within the individual trials. The current visualization demonstrates that agentivity, on its own, did not have much of an effect on Blame assignments.

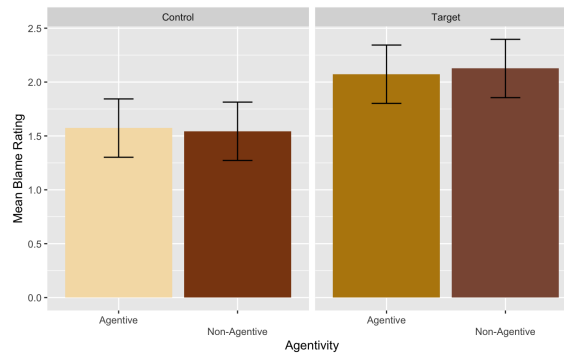


Figure 2: Mean Blame Ratings grouped by Agentivity

3.1.3 Agentivity and Agent Identity

Figure 3 shows the mean blame assignments by agent identity and agentivity. The interaction between the two variables demonstrates an interesting effect. As evidenced by the Target data, participants interpretation of the headline was highly influenced by the identity of the agent, given the corresponding Blame levels between the Man and Cop headlines. However, agentivity also appears to provide a slight effect, given the fact that non-agentive headlines with a non-cop agent yield slightly lower Blame assignments (in other words, less Blame was assigned to the non-cop individual). Similarly, the slightly higher mean Blame rating for the Nonagentive Cop headlines also suggest that participants assigned slightly less Blame to the Cop in these grammatical constructions. All in all, the Target means suggest that agent identity has a large effect on Blame assignments, that is only slightly mitigated by agentivity.

In order to assess whether the grammatical structure or semantic role of headline had an effect on blame assignments, I conducted a mixed-effects linear regression model³. The model examined the relationship between blame ratings and the agentivity of a headline (reference level = Agentive),

³All mixed effects analyses reported in this paper were conducted with the lme4 package (Bates, Mächler, Bolker, & Walker, 2015) in R (R Core Team, 2017)



Figure 3: Mean Blame Ratings grouped by Agent Identity and Agentivity

the identity of the agent (reference level = Cop) and their interaction. The model also included random intercepts and slopes to account for the nesting of data within the different Headlines and individual participants, respectively. The effect of the Man (Non-Cop) as the semantic agent was significant ($\beta = 2.0328$, $SE = 0.1375$, $t = 14.787$, $p < 0.0001$). This demonstrates the expected effect that was visualized in Figure 1, in that headlines involving a non-cop agent yielded high Blame amounts. Our model also suggests that the interaction between NonAgentive constructions and Non-Cop agent identity demonstrated a significant effect as a negative relationship to Blame rating ($\beta = -0.5209$, $SE = 0.1733$, $t = 3.005$, $p < 0.01$). This suggests that more Blame was attributed to the law enforcement officers in Nonagentive constructions, despite agent identity.

3.2 Global Trust

The purpose of the questions inquiring about participant trust in law enforcement was to determine their general attitudes towards cops. In order to calculate their attitudes towards cops, a Confirmatory factor analysis (CFA) was conducted, using the *lavaan* package in R. A CFA is a multivariate statistical procedure that is used to test how well measured variables represents a construct or outcome.

Trust was treated as a latent variable, as I sought to determine how much each participant trusted police officers, by virtue of their experimental answers. I also included an additional latent variable to represent participant political leanings by virtue of their self-reported political party, and measurements on the conservative and liberal scales.

The model linked the variables to the experimental responses on policing and political attitudes and appeared to fit the data very well according to multiple fit indices (CFI = 0.985; TLI = 0.977; RMSEA = 0.075). Conventional CFA analyses believe Root Mean Square Error of Approximation (RMSEA) values of .06 to .08 to constitute a good fit. For the Confirmatory Fit Index (CFI) and the Tucker–Lewis Index (TLI), values greater than 0.95 indicate close fit (Maguire et al., 2017).

Figure 4 illustrates the general form of the simple, structural equation model being tested. The following interpretation of the model is adapted from Maquire et al. (2017). The squares represent the observed variables and circles at the top represents the latent variables, 'Trust' and 'Political leaning'. The curved twoheaded arrows represent correlations, and straight arrows represent causal

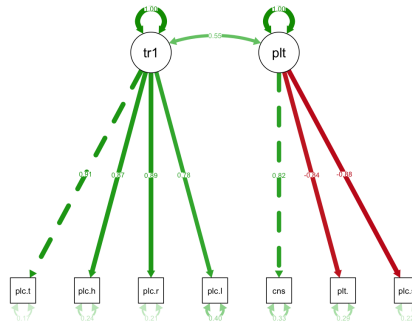


Figure 4: Structural equation model for Trust measurement

effects. The straight arrows that link the observed variables to the latent outcomes represent the structural (regression) part of the model. The straight arrows linking the outcomes to the observed variables represent part of the measurement (confirmatory factor analysis) model. Lastly, the short arrows pointing from right to left into the observed variables represent error terms.

Participant estimated latent values for Trust were then calculated using R’s `lavPredict` function (Plieger et al., 2020). As these estimated values represent the best estimates of the participant’s political attitudes, as well as their overall attitude towards police, the output was then used in further models to estimate the effect of participant trust on blame ratings.

According to the model, a high positive score for Political leaning correlated with a more conservative view. On the other hand, high positive Trust score also correlated with a more positive attitude towards law enforcement officers.

All indicators are listed in Table 3 together the CFA factor loadings. The loadings are uniformly strong, ranging from approximately -0.843 to 0.911. The strongly negative factor loadings for the Liberal and Political Party scale demonstrate its positive correlation with conservatism, given the fact that the higher values on the scales referred to more liberal political views. Responses on the individual Trust indicators were also binarized (1 = Yes; 0 = No).

Table 3: Standardized CFA factor loadings for Trust

Outcome	Indicator	Factor Loading
Trust	Trust in Police	0.911
Trust	Police are honest	0.872
Trust	Police Respect	0.889
Trust	Police Listen	0.776
Political Leaning	Conservative Scale	0.816
Political Leaning	Political Party	-0.843
Political Leaning	Liberal Scale	-0.884

Figure 5 compares the effect of participant Trust levels on mean Blame assignments between the two trial types. Evidently, the plot for the Target trial demonstrates a clear effect of participant trust, where individuals with more positive attitudes towards cops appeared to assign even more to the Non-Cop individual, generally. The next set of models extend this effect, by considering the incorporation of other variables.

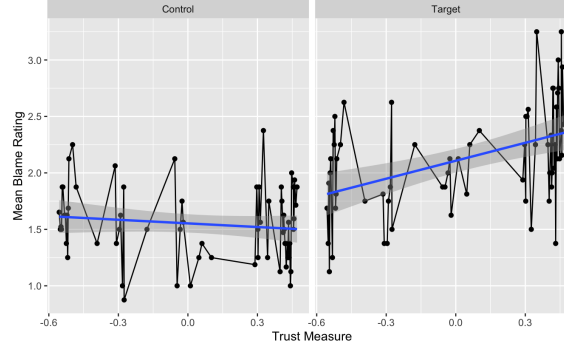


Figure 5: Plot comparing mean Blame assignments by Participant Trust between the two Trial types

Figure 6 graphs the interaction between trust, agent identity, and the effect on Blame assignments within the Target trials. Interestingly enough, the graph illustrates that, when the Cop was presented as the agent, as participant trust in police increases, the level of Blame attributed to the Non-Cop individual also increases. On the other hand, when the Non-Cop individual was presented as the agent, the level of Blame attributed to the non-cop agent also increases, as participant trust in police increased. The plot suggests a clear effect of participant trust on Blame attribution, in that individuals with positive attitudes towards cops appeared to downgrade towards them, regardless of agent identity.

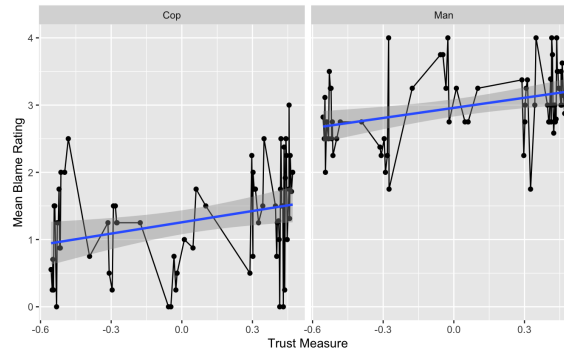


Figure 6: Plot illustrating mean Blame assignments by Agent Identity and Participant Trust, within Target Trials

The final model, Figure 7, illustrates the interaction between the four main variables of analysis. In considering the effect of Trust, agentivity and agent identity on Blame assignments, the present figure suggests that all three independent variables provide some sort of effect. To start, the effect

of trust remains clear, in that individuals with higher Trust values appeared to allocate more Blame towards the Non-Cop individual, generally. In considering the effect of Agent Identity, participants appeared to assign slightly more Blame towards the Non-Cop when they were identified as the agent. In contrast, there appeared to be less of an outright effect of agent identity in cases when the role was the police officer.

In considering the interaction between all three variables, the question of interest revolves around whether there was a larger effect on Blame assignment, for particular grammatical and social combinations. In honing in on the varying levels of Trust, the figure demonstrates that participants with higher Trust values assigned Blame even more to the Non-Cop individual in the agentive sentence constructions, when compared to the nonagentive sentences. Likewise, individuals with lower Trust values appeared to assign the most Blame to the Cop within the agentive sentences. While the Figures 5-7 suggests that agentivity, agent identity and trust all had an effect on the Blame assignments, the current analysis motivates an investigation as to whether or not the relationship between all four variables is statistically significant.

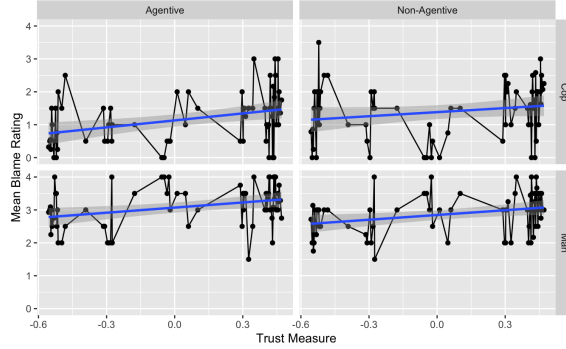


Figure 7: Plot graphing the relationship between Trust and mean Blame assignments, facet-wrapped for Agentivity and Agent Identity

In order to assess whether the grammatical structure, participant prior attitudes and/or semantic role of a police officer had a significant effect on blame assignments, I conducted a mixed-effects linear regression. The model examined the relationship between blame ratings and the agentivity of a headline (reference level = Agentive), the identity of the agent (reference level = Cop), the trust variable calculated in Section 3.2 and their interactions. The model also included by-headline and by-participant intercepts and slopes for agentivity and agent identity.

The independent effects of trust ($\beta = 0.870757$, $SE = 0.155864$, $t = 5.587$, $p < 0.0001$), Man/Non-Cop agent identity ($\beta = 2.031171$, $SE = 0.135608$, $t = 14.978$, $p < 0.0001$), Nonagentive category ($\beta = 0.300442$, $SE = 0.144954$, $t = 2.073$, $p < 0.1$) all provided a significant effect in the prediction of Blame ratings. The interaction between Trust and Man/Non-Cop agent identity ($\beta = -0.461692$, $SE = 0.209873$, $t = -2.200$, $p < 0.05$), as well as the interaction between Nonagentive category and Man/Non-Cop agent identity ($\beta = -0.519189$, $SE = 0.172919$, $t = -3.002$, $p < 0.01$) all reached significance as well.

4 Discussion

The results of this study are consistent with theoretical perspectives at odds with the use of ambiguous grammatical structures when depicting violent events and situations (Bohner, 2001; Dickey, 2022; Kramer, 2020; Mastro et al., 2014; Moreno-Medina et al., 2022). Although questions surrounding systematic obfuscation of police responsibility in the media has received a great deal of attention in recent years, very rarely do studies consider whether or not certain linguistic cues has an effect on perception. Moreover, there has been even less work considering the implication and effect of prior bias on these interpretations.

The results of the present analyses provides clear and robust evidence that both participant attitudes and agent identity provide as much as an effect on Blame assignment, than agentivity. Considering empirical evidence demonstrating that media sources use more obfuscation when officer are the agent of a fatal encounter, relative to civilian homicides (Moreno-Medina et al., 2022), the current analysis indicates that the effect of narrative structure on interpretation is not limited to the grammatical type of the headline or sentence.

The present findings also specifically point to the unavoidable social consequence of individual attitudes, in that, although grammatical structures have a clear effect on interpretation, the dominating influence of individual attitudes and perspectives, on interpretation, maintains widespread prominence (Ecker et al., 2014). As such, the effect of Trust promotes questions of inquiry regarding whether or not it is possible for framing devices to surpass individual biases? What factors, if any, motivate an individual, upon reading a new or troubling source of information, to change their mind or vote against their preconceived ideas?

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