OFFICER-INVOLVED: THE MEDIA LANGUAGE OF POLICE KILLINGS[*]

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This article examines language patterns in U.S. television news coverage of police killings. First, we document that the media use syntactic structures—such as passive voice, nominalizations, and intransitive verbs—that obscure responsibility more often in cases of police killings than in cases of civilian killings. Through an online experiment, we demonstrate the significance of these syntactic differences, revealing that participants are less likely to hold police officers morally responsible and demand penalties when exposed to obfuscatory language, particularly in cases involving unarmed victims. Further analysis of news data shows greater use of obfuscatory language when the victims are unarmed or video footage is available—situations in which obfuscation may have the greatest impact. Exploring the causes of this differential obfuscation, we do not find evidence that it is driven by either demand-side factors or supply-side factors associated with TV station ownership and political leaning. Instead, our results suggest that narratives crafted by police departments are more likely drivers of media obfuscation. This article highlights how syntactic choices and their semantic consequences in media shape perceptions, extending beyond coverage volume and bias. *JEL codes:* K14, K42, L82.

As officers contacted the suspect an OIS [officer-involved shooting] occurred, one of the officer's rounds penetrated a wall that was behind the suspect. Beyond that wall was a dressing room. Officers searched the dressing room and found a 14 year old female victim who was struck by gunfire.

—*Tweet from Los Angeles Police Department Media Relations following the police killings of Valentina Orellana-Peralta and Daniel Elena Lopez, 2021*

I. Introduction

News outlets have many choices about whether and how to describe any event. These choices could affect how people understand and imagine what happened, their perceptions of causality and moral responsibility, and ultimately their broader beliefs and judgments about the world around them. Given its central role in society, media coverage has been extensively studied, with particular attention to which events are covered in the first place (Eisensee and Strömberg 2007; Enikolopov, Petrova, and Zhuravskaya 2011) and how they are reported—for instance, whether the language used is politically slanted, biased, or gendered (Gentzkow and Shapiro 2010; Chiang and Knight 2011; Martin and Yurukoglu 2017; Gay et al. 2018; Jakiela and Ozier 2018).

In this article, we examine another critical aspect of media language—semantics, which is broadly concerned with how the structure of language affects its understood meaning. Specifically, we study the use of particular sentence structures, such as the active versus passive voice and the inclusion versus omission of a subject, which systematically clarify or obfuscate the actor and/or actions taken during an incident. We do this in the context of media coverage of police killings of civilians. Over 1,000 individuals are killed by police annually in the United States, with these deaths accounting for approximately 4% of all homicides.[1] Media watchdogs have called attention to the tendency of news reports and police department press releases to describe police killings using language structures specifically designed to diminish the central, active role of officers in the killings. Journalist Radley Balko has coined the phrase "exonerative tense" to highlight these language structures' apparent aim of dampening

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1. See https://www.cdc.gov/nchs/fastats/homicide.htm.

negative judgments about the appropriateness of the officers' actions.[2]

The article proceeds in several steps. First, using data on the universe of U.S. local and national television news broadcasts from 2013 to 2019, we examine whether there is greater use of obfuscatory language structures in coverage of police killings than in reporting on homicides in general. We use a field survey and an online experiment to causally test whether obfuscatory language matters for how people understand a news story about a police killing, how they assign agency and responsibility, and how they perceive the issue of police reform. We return to the news data to examine whether obfuscatory language is used more frequently by the media in circumstances when our experiment suggests it would have the greatest impact on a viewer's perception. Finally, we explore a series of potential mechanisms driving the media's use of obfuscatory language.

To characterize how the language structure can clarify or obfuscate actions, actors, and the relationships between them, we draw heavily on the linguistics literature (Toolan 2013). Our baseline is a sentence in the active voice, where a police officer is the subject and the victim is the object ("a police officer killed a man"). We capture four dimensions of potential obfuscation of meaning. The first is the use of the passive voice ("a man was killed by a police officer"), which pushes the role of the officer to the background of the sentence, potentially decreasing its salience to the reader. The second is another transformation of the sentence to remove any reference to the police as the cause of the killing ("a man was killed"). We refer to this structure as "no agent." A third obfuscatory structure is the use of nominalization, which involves transforming the action of the police killing into a noun, leaving important information of the event ambiguous ("deadly officer-involved shooting"). The final dimension we consider is the use of intransitive verbs—for example, a transformation of the transitive verb "kill," which requires an agent who generates the action, into the intransitive "die," which does not require a cause ("a man dies [in a shooting]").[3]

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2. See Balko (2014) and Blachor (2020) for related discussions in the popular press.

3. We elaborate on the rationale and details of this classification in Section II.

Our primary data set combines closed-caption texts (i.e., verbatim transcripts of audio) from the universe of U.S. television news broadcasts from 2013 to 2019 (covering national and local stations) with data on the universes of (i) police killings of civilians drawn from the Mapping Police Violence (MPV) database and (ii) civilian gun homicides drawn from the Gun Violence Archive (GVA). We capture the four dimensions of obfuscation using recently developed natural language processing (NLP) algorithms for coreferencing (i.e., finding all expressions that refer to the same actors) and semantic-role labeling tasks (Lee, He, and Zettlemoyer 2018; Shi and Lin 2019).[4] A characterization of media reliance on obfuscation in absolute levels would be difficult to interpret, so as a benchmark, we compare the obfuscation in coverage of police shootings with that in coverage of civilian homicide shootings. We restrict the comparison to homicides in which a suspect is identified somewhere in the story to ensure that the media's potential language choices are comparable.[5] We conduct a number of robustness checks, such as dropping sentences in which the suspect's name appears, to ensure that our results hold when we impose alternative sample selection criteria or specification choices. Our sample includes a total of approximately 6,000 police killings, 8,000 nonpolice homicides, 200,000 stories, and 470,000 sentences that describe the killings.

Our main findings are as follows. We find higher obfuscation in the descriptions of police killings than in those of other homicides across all four dimensions. Overall, there is some obfuscation in 35.6% of stories about police killings, compared with 28.8% of those for civilian homicides, a 25% increase. The estimated effects are even greater when we include media market or station fixed effects and, importantly, when we restrict analyses to the first sentence of the story. In first sentences, obfuscation is 40% greater for coverage of police killings than for reporting on civilian homicides, suggesting that the media use more obfuscation in the most salient part of the story.

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4. We explain the essence of these tasks in Section III.C and describe our implementation in further detail in Online Appendices A.2 and A.3.

5. As we explain in more detail later, if the shooter is not known (as is often the case in the immediate aftermath of an incident), it is natural for the media to use the passive voice with or without elision of the causal agent ("a victim was killed [by an unknown person]") instead of the active ("an unknown person killed a man") in reporting the event.

We test whether obfuscatory language changes how people understand and process the information in a news story. Although such an effect has been hypothesized in the linguistics literature (Toolan 2013), there is scant experimental or empirical evidence of its operation. Before presenting our experimental evidence, we use a large, nationally representative survey, the Cooperative Election Survey (CES), to examine how stated support for police funding varies with the language used in recent media coverage of police killings. We find that obfuscation is positively correlated with support for local police funding, suggesting a link between the language used to describe a recent police killing and attitudes about the police.

We estimate the causal effects of language structures on perceptions and attitudes using an online experiment. We conducted the experiment on Prolific in March 2022 with 2,402 participants. The experiment explores how sentence structures affect responses to a news story about a police killing. We focus on three main outcomes: judgment about the officer's moral responsibility in the incident, demand for departmental and legal penalties for the officer, and financial support for an organization supporting police reform. We evaluate how the outcomes vary with the degree of obfuscation relative to an active-voice structure: a passive-voice verb, a passive-voice verb with no agent, and an intransitive verb, with the latter being the most and the first the least obfuscatory. We test two main hypotheses: (i) that obfuscatory sentence structures decrease the perceived moral responsibility of the police, the demand for penalties, and support for police reform; and (ii) that the degree of obfuscation is reflected in the order of the effect sizes. We vary each treatment arm based on whether the person killed by the police is described as having been holding a weapon.

In line with our preregistered hypotheses, we find strong evidence that obfuscatory language matters and that directionally, the effect sizes increase in the degree of obfuscation. As hypothesized, we also find that the effects are smaller when the story specifies that the victim was armed.[6] Our findings imply that when there is no mention of a weapon, obfuscatory reporting decreases the perceived responsibility and desired level of accountability for the officer and increases the likelihood that the

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6. As hypothesized, we also find evidence that the reported presence of a weapon matters directly, decreasing responsibility and the desire for accountability for the officer.

officer is judged to have been justified in committing the shooting. In cases where a weapon is mentioned, we find smaller yet still statistically significant effects of sentence structures that do not explicitly identify the police officer as the grammatical subject (no agent and intransitive). However, the overall effect of obfuscatory language is statistically insignificant, as the effect of using a passive voice is weaker in this case. Overall, the experimental results indicate strong effects of syntactical structures in news coverage on participants' judgments about the police officer's actions in the specific incident described in the reporting. We also find that obfuscating the direct role of the police in the killing reduces donations for reform by a modest amount.

With experimental results in hand, we return to our news data to examine whether the media are more likely to use obfuscatory language in incidents when language might matter more for perceptions. Media obfuscation is indeed more prevalent for police killings in which the victim was unarmed—that is, precisely when our experimental results imply that such language softens judgments about the moral responsibility of the police officer for the killing. We also find more obfuscation in police killings for which body-worn camera footage is available or when the suspect was not fleeing; these findings again suggest that such language is used in cases where viewers are potentially more likely to form harsher judgments against the police.

We close by exploring plausible mechanisms driving the differential obfuscation. Following Gentzkow, Shapiro, and Stone (2015), we consider both demand- and supply-side drivers. Among the supply-side mechanisms, we distinguish the media's desire to shape how readers understand the news, which we proxy by conservative media ownership and slant in the news and the role of local police departments as primary sources of information. We provide empirical analyses that examine these channels. We find little heterogeneity in the identified effects by local voting patterns, suggesting a small role of demand in obfuscatory reporting, and no heterogeneity by TV station ownership or slant. However, we find that how police departments describe events matters. For six police departments, we collect so-called OIS reports, which are statements released by departments after an officer discharges a firearm. We compute the degree of obfuscation in these statements, match them to the coverage of related events in the TV data, and compare the degree of obfuscation in both. We find a positive correlation between obfuscation in OIS

reports and news coverage, even after including police department fixed effects, suggesting that obfuscatory language likely originates from media reliance on police descriptions of specific incidents.

This article relates to several strands of prior literature. First, our work contributes to a growing literature that employs NLP and computational linguistics to analyze text data: for example, financial reports, newspaper articles, press releases, opinion pieces, social media comments, or congressional transcripts (see Gentzkow, Kelly, and Taddy 2019). These approaches have been fruitful for advancing our understanding of how the tone of a text or speech affects political outcomes (Gentzkow and Shapiro 2010; Grimmer 2010), firm performance, and firm exposure to political, social, and climate risks (Baker, Bloom, and Davis 2016; Hassan et al. 2019; Engle et al. 2020; Giglio, Kelly, and Stroebel 2021). These studies use NLP methods to capture political slant, company executives' views, and market participants' sentiments. Thematically related, a few recent working papers study word choices in arrest reports (Abdul-Razzak and Hallberg 2024; Campbell and Redpath 2022). In economics, prior work has also considered the role of narratives from both theoretical (Bénabou, Falk, and Tirole 2020) and empirical (Widmer, Galletta, and Ash 2022; Ash, Gauthier, and Widmer 2024) angles. Prior research has documented how grammatical structures affect saving behaviors (Chen 2013) and how phrasing choices in media reporting impact perceptions of immigration (Djourelova 2023). Our article adds to this literature by exploring explicitly a key aspect of language—semantics—in a new context: the use of obfuscatory language in news media.

Our study also contributes to the literature documenting the impact of media on a variety of economically and socially relevant outcomes.[7] Research shows that the content and presentation of news affect health choices (Bursztyn et al. 2020), financial markets (Baker, Bloom, and Davis 2016; Engle et al. 2020), and attitudes toward immigration (Gentzkow and Shapiro 2004; DellaVigna et al. 2014; Djourelova 2023) and

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7. For brevity, we focus on the effects of news coverage but acknowledge that there is a long literature on other types of media, including entertainment TV (Kearney and Levine 2015), movies (Dahl and DellaVigna 2009), and educational programming (Gentzkow and Shapiro 2008). See DellaVigna and La Ferrara (2015) for a fuller review of the literature.

that prospective media coverage influences politicians' actions (Durante and Zhuravskaya 2018). We add to this literature by documenting differences in the media's syntactic choices in coverage of police killings and analyzing how these choices affect perceptions of these incidents. Closer to our specific research question, previous studies show that news also influences people's voting behaviors (DellaVigna and Kaplan 2007; Chiang and Knight 2011; Cagé 2020; Couttenier et al. 2024). Our field evidence and online experiment shows that information and syntactical structures influence people's perception of events, which in turn could affect political stances and support for policies (Alesina, Ferroni, and Stantcheva 2021; Andre et al. 2021; Bursztyn et al. 2023). Moreover, several papers relate news coverage or political speeches to perceptions of crime, offending, and police or jury behaviors (Mastrorocco and Minale 2018; Philippe and Ouss 2018; Mastrorocco and Ornaghi 2020; Galbiati, Ouss, and Philippe 2021; Grosjean, Masera, and Yousaf 2023; Ash and Poyker 2023).

Research outside economics has also investigated how police departments' activities are covered in the news, mainly through the coverage of crime. In early studies, Gilliam and Iyengar (2000) and Gilliam et al. (1996) show overreporting of crime when the suspect is Black, but later studies do not find this to be the case (Dixon and Williams 2015). Duxbury et al. (2018) establish that media are more likely to emphasize mental illness if the perpetrator of a mass shooting is white than if he is Black or Hispanic. Grunwald, Nyarko, and Rappaport (2022) find that police agencies' Facebook posts overrepresent Black suspects relative to their proportion among local arrestees. A few studies have also explored variation in media coverage of crime by perpetrator or victim gender (Henley et al. 1995; Frazer and Miller 2009; Yasmin 2021) and documented the high use of passive-voice structures in coverage of sexual assault (Bohner 2001; Lussos and Fernandez 2018).

Last, our article builds on findings in cognitive science and linguistics. Closest to our work is the research showing that semantic choices affect perceptions of the moral responsibility of perpetrators (De Freitas et al. 2017) and victims (Henley et al. 1995; Niemi and Young 2016; Northcutt Bohmert, Allison, and Ducate 2019). Our experimental results provide new evidence along these lines, demonstrating that the use of obfuscatory language decreases the assignment of moral responsibility and

the desired level of accountability for police officers who kill civilians.

II. Linguistics Framework

We describe the linguistics framework that forms the basis of our empirical analysis. Our primary goal is to identify particular sentence structures that work to either clarify or obfuscate the agents and actions described in a news story, thereby affecting the viewer's (reader's) perception of what happened and who was responsible. Our framework draws heavily on chapter 8 of Toolan (2013), which includes a detailed characterization of how different sentence structures affect perceptions of causal relationships and the assignment of causal agency.[8]

In psycholinguistics, the term "causative construction" refers to how language is used to depict causation from one subject (the causal agent) to another (the causal patient). The baseline construction for comparison throughout the article is a sentence structure that clearly identifies the action with an active-voice verb, the causal agent as its subject, and the causal patient as its object—that is, sentences of the form "A police officer killed a man." Following Toolan (2013), we focus on four key syntaxes that can be used to obscure the action or roles of the causal agent and patient: (i) passive-voice rather than active-voice verbs; (ii) nominalizations, that is, nouns created from verbs; (iii) the failure to identify a causal agent; and (iv) intransitive rather than transitive verbs. We present these sentence structures in turn. Table I provides simple examples (in the first and third columns) and examples drawn directly from our news broadcast data (in the second and fourth columns) to illustrate how these sentence structures are deployed in the contexts of killings by police (first and second columns) and killings by civilians (third and fourth columns).

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8. Toolan (2013) also discusses other narrative forms that can modify perceptions of causal relations, such as direct commentary and evaluation or editorial choices on how to name things (for example, choosing between the terms "rioter" and "demonstrator"). While also of potential interest regarding the media coverage of police killings, characterizing these aspects of media language is beyond the scope of this research because it is difficult to identify such strategies at scale and compare their usage across different kinds of news stories, as these word choices are likely to be domain specific.

TABLE I

OBFUSCATORY SENTENCE STRUCTURES: EXAMPLES

Sentence structure	Police killing		Civilian killing	
	Simple example	Example from news broadcasts	Simple example	Example from news broadcasts
Active voice	A police officer killed a person.	Investigators believe the police officer shot and killed the man just before nine o'clock.	A suspect killed a person.	They believe [name of suspect] stood over the boys as they slept on the couch and shot them.
Passive voice	A person was killed by a police officer.	New developments, a California man under arrest tonight accused of making a prank call that led to a victim being shot to death by the police.	A person was killed by a suspect.	The Goodhue County attorney says that the man was shot in the chest by the suspect early yesterday morning.
Nominalization	A person was killed in an officer-involved shooting.	An officer-involved shooting late Thursday night claimed the life of a Monroe man.	A person was killed in a domestic-violence shooting.	A 30-year-old man was shot and killed on Tuesday in a gang-related shooting.
No agent	A person was killed.	Officials say the 45-year-old man was shot after he refused to drop a knife.	A person was killed.	Several shots were fired at the doorway into the apartment with several adults, a toddler, and an infant inside.
Intransitive	A person died.	The man has died after a shootout with police officers in St. Louis.	A person died.	[Name of victim] died at the scene of that shooting.

II.A. *Passive versus Active Voice*

The sentence "A police officer killed a man" uses a transitive verb in active voice and identifies the causal agent as subject, with no nominalization. A first way to diminish the responsibility of the causal agent for the action is to instead use the passive voice: "A man was killed by a police officer." With the active voice, the subject acts on the object through the act described by the verb. This sentence structure is considered to be strong, direct, and clear. It also orients the causal agent in the place of rhetorical emphasis at the start of the sentence. In contrast, the passive voice turns the causal patient (the victim) into the verb's subject and relegates the causal agent (police officer) to the sentence's predicate, a position of lower salience to the reader.

The function of the passive voice is to deemphasize the agent, and there is evidence that its use changes the perception of the reader or viewer. As noted by Chestnut and Markman (2018, 2245), "Stating 'The woman was abused by the man' rather than 'The man abused the woman' causes people to be more accepting of violence against women, because the passive voice distances perpetrators from their crimes and consequently makes the crimes seem less severe (Henley, Miller, and Beazley 1995)." Recent work in linguistics and cognitive science suggests that the passive voice increases psychological distance with respect to the narrated event by making it seem more distant in time and space and more hypothetical (Chan and Maglio 2020). Furthermore, as we will see, the passive voice makes it easier to omit a subject altogether, thereby abstracting from the role of the causal agent to an even greater extent.[9]

II.B. *Nominalization*

Nominalization is the process of transforming an adjective or verb into a noun. It is a key linguistic resource in everyday language, as it allows one to refer to an event without fully narrating it. In news reporting, it helps shorten stories but can also be a tool to obfuscate agency because it abstracts from the relationship between the person being killed and the person doing the killing and thus leaves some aspects of the narrative ambiguous. In the context of police killings, a common nominalization is the

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9. For a typological and functional overview of the passive, see Kazenin (2001).

term "officer-involved shooting," which can stand in for the less ambiguous "a police officer killed a civilian." There are two things to note in this case. First, even though the participation of an officer is noted with this nominalization, the officer's causal role in the shooting is not specified. Second, although the police officer might have killed someone (as in our data), the chosen verb for the nominalization is not "to kill" but "to shoot."[10] Thus, it also leaves ambiguous the fact that someone was killed. In the context of civilian killings, phrases such as "intimate-partner killing" or "gang-related shooting" are used.

II.C. Failure to Identify the Causal Agent

A third way to diminish the ability of a reader to assign responsibility for an action is to remove the causal agent from a passive-voice sentence altogether—for example, "A man was killed following a police chase" instead of "A man was killed by a police officer." In this case, the person responsible for the killing is not referenced at all. This construction contrasts with those in which the causal agent is the subject of a sentence (preceding an active-voice verb) or is explicitly mentioned after the causative preposition "by" (after a passive-voice verb), where a direct connection between the agent and the action is made.

II.D. Intransitive Versus Transitive Verbs

A fourth way to obfuscate causation and responsibility is to use an intransitive verb, which takes no object: "A man died following an incident on the North Side." Wolff (2003) categorizes transitive verbs such as "to kill" and "to shoot" as causative verbs because they implicitly relay the idea that the causal agent in the sentence acted upon the receiver of the action directly, intentionally, and without an intervening actor. By contrast, intransitive verbs such as "to die" do not require a causal agent or even imply causation at all. Instead, intransitive constructions feature only the causal patient (as subject), here the deceased person. Thus, the use of intransitive verbs not only obfuscates responsibility for

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10. The comparable phrase "officer-involved killing" is not commonly used by the news media.

an event but implicitly abstracts from causality, directly increasing the ambiguity about what happened in the first place.[11]

II.E. Putting It All Together

For simplicity, we use the labels "passive," "nominalization," "no agent," and "intransitive" to refer to these four forms of obfuscatory sentence structures throughout the rest of the article. Importantly, these sentence structures are not mutually exclusive and are often combined in practice. We use the term "any obfuscation" to refer to the use of any of these structures and define a sentence as having "no explicit agent" if "no agent" or "intransitive" applies. Finally, as the progression in Table I suggests, we use the order in which we introduced these sentence structures—*Active >> Passive >> Nominalization >> No agent >> Intransitive*—to define a hierarchy of causal clarity or, in reverse, a hierarchy of obfuscation.

Previous research in linguistics and moral philosophy in particular has demonstrated that variation in these sentence structures influences how readers interpret an event. For example, in early work, Trew (1979) argues that news writing uses narrative structures that reflect dominant social beliefs. Wolff (2003) and Pinker (2007), among other scholars, emphasize how perceptions of causation can be influenced by choices in sentence construction. Closely related to our work, De Freitas et al. (2017) show that there is a close relation between choices of causative verbs and the subsequent moral judgment of viewers/readers.

III. Data, Sample Construction, and Language Processing

III.A. Primary Data Sources

For our main analyses, we draw data from several sources: a comprehensive data set on the universe of police killings in the United States between 2013 and 2019, a database with details on the (near) universe of gun-related killings in the United States from 2014 to 2018, and the closed captions (text transcriptions) of all televised news broadcasts on local and national stations from 2013 to 2019.

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11. Note that you cannot say "The police officer *died* the victim" or 'The victim was *died* by the police." Pinker (2007) refers to this as the intransitive "resisting" a causative.

1. *Police Killings.* There is no official government record of police killings in the United States. As a result, in recent years, journalists, activists, and researchers have undertaken independent efforts to build a comprehensive database of all such killings. For our analysis, we use data from MPV. The MPV research group identifies and documents all police killings occurring in the United States since 2013. The incidents are identified from crowd-sourced databases on police killings in the United States, including FatalEncounters.org. MPV processes each potential case and improves the quality and completeness of the data by examining available information about the case from traditional and social media and obituaries. Conner et al. (2019) find that the MPV covers 98.3% of all police killings in 2015. The MPV data set includes information on the victim's name and race, the police department responsible for the killing, the address and ZIP code where the incident took place, and some contextual details (e.g., whether the victim was allegedly armed, or whether there is body-worn camera footage).

2. *Civilian Gun Homicides.* As in police killings, there is no official government database of civilian homicides in the United States. To build a database of civilian homicides comparable to that of the police killings identified by MPV, we draw on data from the GVA. This database is compiled by a nonprofit organization aiming to register all known shootings in the country. Incidents in the GVA are collected daily from over 7,500 law enforcement, media, government, and commercial sources. Each incident is verified by an initial researcher and subsequently subjected to a secondary validation process. Like the MPV data, the GVA includes the victim's name in the vast majority of cases. The GVA also includes information on the suspect, when available. Since the GVA does not include information on the race of the victim or suspect, we impute the posterior probability that each subject belongs to a particular racial or ethnic group with the information on the name and location where the incident took place (Imai and Khanna 2016; Khanna, Imai, and Hubert 2017).[12]

12. The imputation algorithm uses the probability of an individual being part of a racial or ethnic group based on the name and census tract, with a 50% probability threshold as in Moreno-Medina (2024) and Collinson et al. (2024). This posterior probability is estimated with the package WRU in R.

Finally, to isolate only civilian homicides in the GVA, we drop all suicides, accidental deaths, and deaths due to a police shooting.

3. *Television News Broadcasts.* Our media data set contains the universe of closed-caption text across all television news programs in the United States.[13] The data were provided by News Exposure (NE), a data vendor that monitors and collect transcripts from over 948 distinct TV stations across the 210 media markets in the United States. Local and national stations are included in the database.[14]

All together, over 2 million station-days of news transcripts are available for our analysis. As we describe later, we search these comprehensive transcripts for stories about the police killings and civilian homicides recorded in the MPV and GVA data, respectively. In addition to the text of an associated news story, we obtain information on the broadcast station, network affiliation, media market, date and time, run time, publicity value, and ratings estimate.

We complement the previous data sources with information on the demographics of the tract and media market in which the killings took place from the American Community Survey and census. We merge the designated media area (DMA) demographic data and electoral results from Martin and McCrain (2019).

III.B. Sample Construction

To measure the use of obfuscatory language structures in media coverage of police killings, we need a meaningful benchmark, as absolute levels of such usage would be difficult to interpret. To this end, our primary analysis compares media coverage of police killings to that of civilian homicides. We impose several sample restrictions to ensure that this comparison is as meaningful as possible.

First, because the GVA database includes only information on gun deaths (not other forms of homicide), we limit our sample

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13. The data encompass all available time slots. While the majority of news programs are typically broadcast in the morning (5 am–8 am), at noon (12 pm), in the afternoon (4 pm–6 pm), and at night (9 pm–11 pm), our sample also considers other time frames in case a TV station airs a story at a different time.

14. These data are also used in Moreno-Medina (2024).

to police killings by gunshot, which represent more than 90% of all police killings.[15]

Second, we impose a set of sample restrictions designed to isolate the circumstances in which media could have used similar language to describe police killings and civilian homicides. A key issue is that the available information is different for police and civilian killings. By definition, in most cases, when a police officer is the perpetrator, we can assert that a police officer killed a person. It is feasible to construct active phrases of the form "a police officer killed a person." However, the formulation of such phrases becomes more challenging in cases where a specific suspect for a civilian killing has not been identified. By contrast, it may not be possible for media to identify a causal agent in a civilian homicide when a suspect/perpetrator has not yet been identified. In the absence of such information, it is natural for media to instead focus the narrative on the victim and abstract from the agent—for example, "a 40-year-old man was shot last night." To make the police and civilian killings data as comparable as possible, we limit our sample of civilian homicides to those in the GVA database in which the name of the suspect is known.[16]

For our baseline analysis, we further limit the sample to news stories in which the suspect's name appears. To avoid concerns that this sample restriction biases our analysis toward finding a greater use of active sentence structure for civilian homicides, we consider a number of alternative specifications to ensure robustness, including dropping sentences that include the suspect's name and focusing on the first sentence in the story.

Online Appendix Table E.1 shows how the case composition changes with our sample-construction choices. For police killings, our sample is very similar on all observables. For civilian killings, the requirement that the suspect is known increases the share of domestic violence and murder-suicide cases in the data. In turn, our sample has more women, and the victims are slightly older than the average shooting victim in the United States. The racial

15. In particular, of the 7,663 police killings documented by MPV, 7,299 are caused by gunshot, and our final sample consists of the 7,293 of these that could be geolocated.

16. Starting from an original sample of 49,277 gun deaths, we drop all suicides and accidental deaths, drop deaths due to a police shooting, and restrict the sample to those civilian homicides in which the name of the suspect is available in the GVA. These sample restrictions yield a data set of 19,325 civilian gun homicides, and our final sample consists of the 17,939 of these that could be geolocated.

and geographic composition of the victims in our analysis sample is the same as that of the full sample.

To match police killings and civilian homicides to news coverage, we use a machine learning–based procedure that follows three sets of requirements intended to ensure a high-quality match, as in Moreno-Medina (2024). First, we subset the NE data to text transcriptions that include words related to a killing/homicide such as "shot," "shoot," or "killed," which sharply increases the probability that a news story is about crime.[17] We keep stories with a score above a certain threshold and manually check the accuracy of this threshold, finding that 99% of all the identified stories indeed cover a crime or police incident.[18]

Second, we require a story to contain either the name of the victim or the address (block and street) in which the event happened. Third, we consider only stories that aired within seven days of the victim's death. The goal of this last restriction is to limit misclassification of stories (especially for victims with common names) by essentially requiring a match on date and name or address. Finally, for our sentence-level analyses, we focus on sentences in which (i) there are references either to the victim or the suspect and (ii) the sentence is informing on the killing. Our final sample includes 192,944 stories and 466,636 sentences linked to 5,759 police gun killings and 7,943 civilian gun homicides for which we are able to find at least one broadcast news story.[19]

Table II, Panel A presents descriptive statistics for the police-killing and civilian-homicide samples. Compared to victims of civilian gun homicides, victims of police shootings are much more likely to be male (95% compared with 72%), are slightly older (37 years old compared with 34 years old), more likely to be Hispanic (16% compared to 9%) and white (58% compared with 47%), and less likely to be Black (18% compared with 28%). We control for these demographic variables in all of our empirical

17. For civilian homicides, we use all forms of the following keywords: "shot," "gunshot," "kill," and "homicide." For the police shootings, we search for all forms of the keywords "shot," "gunshot," "kill," "homicide," "police," and "officer."

18. In this way, our algorithm does a good job of ruling out unrelated stories that might uses similar words—for example, a sports story in which the word "shot" describes a basketball or soccer play rather than the action of a gun.

19. Note that there are on average 56 stories per police killing and 19 per civilian killing. In Section IV.B, we provide evidence that our results are not driven by differences in coverage volume.

TABLE II

DESCRIPTIVE STATISTICS

	All (1)	Police killings (2)	Civilian killings (3)
Panel A: Subject level			
Victim characteristics			
Age	35.13	36.79	33.90
Male	0.81	0.95	0.72
Black	0.24	0.18	0.28
Hispanic	0.12	0.16	0.09
White	0.52	0.58	0.47
Other/unknown	0.12	0.07	0.15
Incident characteristics:			
Body-worn camera	0.11	0.11	.
Victim not fleeing	0.66	0.66	.
Observations	13,702	5,759	7,943
Panel B: Sentence level			
Dimensions of obfuscation			
Passive	0.20	0.22	0.17
Nominalization	0.04	0.04	0.03
No agent	0.16	0.16	0.15
Intransitive	0.11	0.12	0.11
Any obfuscation	0.34	0.36	0.29
No explicit agent	0.26	0.27	0.25
Observations	466,636	320,042	146,594

Notes. This table presents the mean values for subject-level victim characteristics (Panel A) and sentence-level dimensions of obfuscation (Panel B) for the cases in our sample. Data sources: GVA, MPV, and NE.

analyses. Online Appendix Figure D.1 presents trends over time in the number of police killings and civilian homicides included in our final sample.

III.C. Language Processing

In this section, we explain how we process the text data once we have our primary sample of news stories linked to police killings and civilian homicides. Online Appendix Figure A.1 presents a flowchart of our process. We apply three language-processing steps to construct the measures of obfuscation. Our implementation of these steps uses a series of NLP models, based on bidirectional encoder representations from transformers (BERT).[20] As will be clear, we need a language model such as

20. BERT is a neural network model of language that is very successful at a host of tasks in NLP. BERT has several technical features, but one of the most

BERT that captures contextual embeddings for words. The three steps in our process are as follows:

    i. Identify all words that reference the same individual (coreference resolution).

    ii. Identify who did what to whom in sentences about the shooting.

    iii. Encode our measures of obfuscation.

Additional details can be found in Online Appendix A.

1. *Coreference Resolution and Story Delimitation.* First, we identify all words used to refer to the same individual (victim or suspect), including pronouns. We adopt the method proposed by Lee, He, and Zettlemoyer (2018) and implemented by Gardner et al. (2017), which uses a BERT-like neural network called Span-BERT (see Online Appendix A.2 for more details). The model takes text as an input and outputs a list of clusters of tokens (or words) considered to refer to the same individual. We define a broadcast story about the killing as the span between the first and last sentence in which the victim or suspect appears in the caption text.

2. *Semantic-Role Labeling.* Second, we need to identify for each sentence who (agent) does what (action) to whom (patient). This task is known in the NLP literature as semantic-role labeling (Online Appendix A.3 provides more details). We implement another BERT-type model, this time the one proposed by Shi and Lin (2019). Given that we want to identify how the killing is being covered, we focus on sentences that include verbs informing on the killing ("kill," "shoot," etc.). For these sentences, the algorithm produces an analysis for each verb, detailing who is executing the action and who is being acted upon. For our purposes, we want to identify who is executing the action of killing or shooting (agent) and who is being killed or shot (patient). This same output allows us to see whether an individual is the subject of

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important is that it trains the model using not only previous words in a text but also future words. The standard model allows up to 512 words (or tokens) in a text. The network has seven layers, and it works with a type of word-embedder model that captures the context in which the word is being used. Since 2019, Google Search has been applying BERT models for English-language search queries in the United States.

the intransitive "to die," as well. We classify each verb into the following categories:

- Transitive: verbs that start with any of the texts in the list "kill," "shot," "gun," "murder," "shoot," "hit," "fire," "open," or "strike" or that are passive voice conjugations of these verbs[21] or of "declare," "find," or "pronounce" followed by a past participle such as "shot" or "killed."
- Intransitive: the verb "die" or an auxiliary verb followed by the past participle "died."
- Irrelevant: all others.

We focus on sentences in which the identified causal patient for these verbs is the victim in our data.

3. *Obfuscation Classification.* Last, we create our measures of obfuscation as described in Section II; that is, we identify which of the following structures appear in each sentence: an active-voice verb, a passive-voice verb, a nominalization, no agent, or an intransitive verb. Online Appendix A.4 presents the exact phrases used.

IV. Obfuscation in News Stories on Police Killings

We present the results of our analysis of news broadcasts examining whether media are more likely to use obfuscatory sentence structures in stories about police killings than in a control sample of stories about civilian homicides. We present two analyses: one using all sentences that reference the killing, and another using only the first sentences from these stories. We focus on the first sentence or lede because it is likely the most salient to viewers. Then we present results from a number of additional specifications to examine whether the main results are robust under alternative designs, primarily related to sample selection.

IV.A. Main Results: TV News Broadcasts

To offer an initial sense of whether news media are more likely to use obfuscatory sentence structures in stories about police killings, Table II, Panel B presents summary statistics on the prevalence of different structures broken down by whether

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21. That is, the verb is a form of "to be" followed by the past participle of one of the above verbs (e.g., "the man was killed").

a police officer or civilian was responsible for the killing. Overall, in the raw data, the use of any obfuscatory sentence structure is 24% more likely when a police officer was responsible for the killing (36% versus 29%). This aggregate result reflects the greater use of all four obfuscatory sentence structures in stories about police killings, especially passive voice (22% versus 17%). Online Appendix Figure D.2 plots the fraction of sentences with obfuscation over time, revealing that the increased prevalence of obfuscation in stories about police killings is stable over the study period.

To control for other potential differences in stories about police and civilian killings (e.g., age, sex, and race of the decedent), we estimate regressions of the following form:

$$(1) \qquad Obfuscation_{eitsd} = \beta_1 Police_i + \beta_2 X_{itsd} + \epsilon_{eitsd},$$

where e indexes a sentence about incident i at time t on station s in media market d. $Police_i$ is a dummy equal to one if the news story is about a police killing, and X_{eitsd} includes controls for incident characteristics, date, TV station, and media market. All of our analyses except the one with no controls include a linear time trend.

For our first analysis, we treat each sentence in the story that references a killing as an observation and cluster the standard errors at the individual-subject level (that is, at the incident/victim level). Table III, Panel A presents results for five specifications. The specification shown in column (1) includes no controls. Column (2) adds story-level controls (age, sex, and race of the victim), while columns (3) and (4) successively add media market and TV station fixed effects. The specification in column (4) is our preferred specification because it effectively compares the coverage of police killings with that of civilian killings for the same television station in the same media market. Column (5) replaces the linear time trend for the specification in column (3) with month × year fixed effects, primarily to check whether there are any nonlinear time effects for which the linear time trend does not adequately control.

For each specification, we report results for six dependent variables in the table rows. The final four rows report the results for the four distinct obfuscatory sentence structures, and the first two rows report results for dependent variables that aggregate these outcomes. The second row reports results for the aggregate category *No explicit agent*, which combines *No agent* and

TABLE III

OBFUSCATION IN NEWS OF POLICE KILLINGS

Outcomes: dimension	Mean civ.	Police killing				
of obfuscation	shoot.	(1)	(2)	(3)	(4)	(5)
Panel A: All sentences in a news story ($N = 466{,}639$)						
Aggregate dimensions						
Any obfuscation	0.2935	0.062***	0.070***	0.073***	0.074***	0.075***
		(0.008)	(0.008)	(0.008)	(0.008)	(0.007)
No explicit agent	0.2481	0.024***	0.031***	0.034***	0.034***	0.035***
		(0.007)	(0.007)	(0.007)	(0.007)	(0.006)
Individual dimensions						
Intransitive	0.1075	0.011**	0.013***	0.017***	0.018***	0.024***
		(0.005)	(0.005)	(0.005)	(0.005)	(0.004)
No agent	0.1497	0.011**	0.016***	0.016***	0.015***	0.010*
		(0.006)	(0.006)	(0.006)	(0.006)	(0.005)
Nominalization	0.0282	0.010***	0.011***	0.012***	0.012***	0.013***
		(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Passive	0.1692	0.047***	0.052***	0.051***	0.051***	0.046***
		(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Panel B: First sentence in a news story ($N = 182{,}145$)						
Aggregate dimensions						
Any obfuscation	0.2815	0.105***	0.118***	0.120***	0.120***	0.120***
		(0.010)	(0.009)	(0.009)	(0.009)	(0.009)
No explicit agent	0.2072	0.059***	0.070***	0.072***	0.071***	0.067***
		(0.008)	(0.009)	(0.009)	(0.009)	(0.008)
Individual dimensions						
Intransitive	0.0748	0.035***	0.041***	0.046***	0.046***	0.051***
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
No agent	0.1405	0.022***	0.027***	0.025***	0.024***	0.014**
		(0.006)	(0.007)	(0.007)	(0.007)	(0.006)
Nominalization	0.0526	0.019***	0.020***	0.021***	0.022***	0.025***
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Passive	0.1663	0.063***	0.069***	0.066***	0.065***	0.057***
		(0.007)	(0.008)	(0.008)	(0.007)	(0.007)
Story controls			X	X	X	X
DMA fixed effects				X	X	X
Station fixed effects					X	X
Month-year fixed effects						X

Notes. This table presents our estimates of differential obfuscation in stories about police killings relative to stories about civilian killings, from our estimation of equation (1). In Panel A, we include all sentences; in Panel B, our sample is limited to the first sentence in a news story. We vary which controls are included across columns: Column (1) has no controls, column (2) adds a linear time trend and story-level controls, column (3) adds DMA fixed effects, column (4) includes station fixed effects, and column (5) has month-year fixed effects instead of a linear time trend. Each row presents estimates for a different outcome described in the first column. We report the coefficient on an indicator, equal to one if a story is about a police killing, zero otherwise. The sample for civilian killings includes incidents and news stories where a suspect was identified. All sentences include some mention of either the victim or suspect. We define "Any obfuscation" as a sentence with a passive-voice verb, no agent, an intransitive verb, or a nominalization. We define "No explicit agent" as a sentence with no agent, an intransitive verb, or a nominalization. See Section II for more details. Standard errors clustered by subject are in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$. Source: NE.

Intransitive, and the first row aggregates all four categories to report the use of *Any obfuscation* in the sentence. We find a consistent pattern across all the specification results shown in Table III: sentences in stories about police killings are approximately 25% (7 percentage points) more likely to use some form of obfuscation than stories about civilian killings, and there is an increased propensity to use each distinct form of obfuscation. Visually, the results for column (3) are presented in Online Appendix Figure D. 3, Panel A as a share of the mean obfuscation in civilian killings.

In our preferred specification (column (4)), *Passive* and *No explicit agent* sentence structures are 30% (5.1 percentage points) and 14% (3.4 percentage points) more likely to be used in stories about police killings, respectively. *Nominalization* is generally the least common form of obfuscation used by media, but it too is much more prevalent (43%, 1.2 percentage points) in stories about police killings. Overall, our results indicate that news coverage of police killings is significantly more likely than coverage of civilian homicides to use sentence structures that obscure responsibility for the killing.

Table III, Panel B presents a set of results analogous to those reported in Panel A for specifications that include only the first sentence of the story. News organizations tend to present what they consider the most essential or attention-grabbing facts about a story in the first sentence, which is generally expected to be especially salient to viewers (AP 2020). As a result, we expect any obfuscation in the lede to have an outsized effect on how viewers understand and respond to the incident.

The analysis of first sentences yields results that are qualitatively similar to, yet quantitatively larger than those presented in Table III, Panel A and in Online Appendix Figure D.3, Panel B, where we display coefficients as a share of the mean obfuscation in reporting on civilian killings. For the first sentence, obfuscation is approximately 40% (12 percentage points) more likely to appear in coverage of police killings than in reporting on civilian homicides. For first sentences, *Passive*, *No explicit agent*, and *Nominalization* are each approximately 35%–50% more likely to be used in stories about police killings. The results presented in Table III, Panel B suggest that the media's use of obfuscation in coverage of police killings is especially likely in the first sentence—that is, the most salient part of the story.

TABLE IV

ROBUSTNESS TESTS

Dimension of obfuscation	All sentences		First sentence	
	Any obfus-cation (1)	No explicit agent (2)	Any obfuscation (3)	No explicit agent (4)
Panel A: Main results (column (4) of Table III)				
Police killing	0.074***	0.034***	0.120***	0.071***
	(0.008)	(0.007)	(0.009)	(0.009)
Observations	466,639	466,639	182,145	182,145
Mean civ. shoot.	0.2935	0.2481	0.2815	0.2072
Panel B: Dropping sentences where suspect is named				
Police killing	0.075***	0.035***	0.121***	0.072***
	(0.008)	(0.007)	(0.009)	(0.009)
Observations	464,904	464,904	181,492	181,492
Mean civ. shoot.	0.2928	0.2474	0.2805	0.2061
Panel C: Keep stories if "suspect" mentioned				
Police killing	0.068***	0.025***	0.114***	0.059***
	0.008	0.007	0.008	0.008
Observations	503,180	503,180	192,413	192,413
Mean civ. shoot.	0.2974	0.2547	0.2853	0.2158
Panel D: No domestic violence in civilian shooting				
Police killing	0.069***	0.031***	0.117***	0.072***
	(0.008)	(0.007)	(0.009)	(0.009)
Observations	434,362	434,362	170,012	170,012
Mean civ. shoot.	0.2983	0.2502	0.2831	0.2022
Panel E: Weighted by 1/# sentences				
Police killing	0.073***	0.048***	0.111***	0.081***
	(0.005)	(0.004)	(0.007)	(0.007)
Observations	466,639	466,639	182,145	182,145
Mean civ. shoot.	0.3237	0.2677	0.3062	0.2213

Notes. This table presents robustness tests for our main results, for all sentences (columns (1) and (2)) and for the first sentence (columns (3) and (4)). Panel A presents our preferred specification from Table III, column (4), which includes linear time trends, story-level controls, and DMA and station fixed effects. In Panel B, we drop sentences in the civilian-killing sample where the suspect is named. In Panel C, we keep stories in which the word "suspect" appears in the closed captions, even if the name does not appear. In Panel D, we drop stories about domestic violence incidents. In Panel E, we reweight sentences by 1/number of sentences in a particular story. We define "Any obfuscation" as a sentence with a passive-voice verb, no agent, an intransitive verb, or a nominalization. We define "No explicit agent" as a sentence with no agent, an intransitive verb, or a nominalization. See Section II for more details. Standard errors clustered by subject are in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$. Source: NE.

IV.B. Robustness Checks

Table IV reports the results of a number of specifications designed to examine the robustness of our main findings across alternative study designs. For comparison, Panel A repeats the estimates from our preferred specifications in Table III, column (4),

while Panels B–E report analogous results for four alternative models.

When constructing the control sample of civilian homicides, our goal was to identify cases where the media faced a similar choice of language for both police and civilian killings. As a key sample-selection criterion, we require the suspect's name to appear in the story. This choice aims to ensure that an agent (police officer, civilian suspect) could possibly have been mentioned in the story—that is, to exclude cases where a death occurred but nothing about a potential suspect (or even whether the incident was a homicide) was known at the time of the news report. One of our primary concerns with this sample-selection criterion is the possibility that requiring the suspect's name to appear in the story might bias the sample toward including more active-voice sentence structures for civilian homicides. We are particularly concerned that the suspect's name might appear commonly as the subject of a sentence describing the murder.

To address this concern, Panel B reports the estimates for a specification that drops all sentences that include the suspect's name. The results are virtually unchanged, suggesting that our concerns about greater use of active-voice sentence structures involving the suspect's name are unfounded. Interestingly, only 1,735 sentences are dropped in this specification, despite our sample covering 58,033 stories about civilian homicides and our requirement that the suspect's name appear in the story. This implies that in most cases when the suspect's name appears in a news story, it is not in a sentence included in our main analysis (which must directly describe the death/killing). Instead, the suspect is often named in a stand-alone sentence (e.g., "John Doe was identified as the suspect in the case") and thus does not make it into our sentence-level analysis sample.

In a second test, we include all stories about civilian killings containing the word "suspect," even if the suspect is not directly named. Similarly to how a police officer could be the agent in relevant sentences, a potential suspect could also serve as the agent for civilian killings. However, unlike for police killings, we are relying solely on the content of the TV broadcast. Therefore, by selecting stories with the word "suspect," at least one sentence may mention an agent, which could lead us to potentially understate the extent of differential obfuscation, especially for *No explicit agent*. In spite of this potential selection issue, the results

presented in Panel C show that our findings remain largely unchanged.

Panel D reports results from specifications that remove news stories about domestic violence. Our concern in this case is that news stories about domestic violence might be especially likely to center on the victim, resulting in the use of different sentence structures. The results reported in Panel D are largely unchanged.

We provide two tests to see whether the difference in language is due to the difference in volume of coverage per story. As specified earlier, there are on average 56 stories per police killing and 19 stories per civilian killing. One may be concerned that a small number of viral incidents that receive a great deal of media attention drive our main results. To deal with this concern, in Panel E, we reweight each sentence by the inverse of the total number of sentences per victim, thereby giving equal weight to all victims. The findings are again remarkably similar to our main results, implying that the increased use of obfuscatory sentence structures for police killings is not limited to high-profile cases. Second, in Online Appendix Figure D.4, we break down our sample by whether an incident led to "viral" media coverage, with viral coverage defined as coverage in more than 100 news segments. For nonviral incidents, there are on average 16 stories per civilian killing, compared with 27 per police killing (these numbers are 447 and 620 for viral stories). The results are very similar in these two kinds of stories, suggesting that volume of stories per incident does not drive the differential obfuscation.

Last, Online Appendix Figure D.5 provides further robustness tests. We rerun the main estimates for different subgroups: limiting our sample to years for which we have both GVA and MPV data (2014–2018); separately considering news stories aired on the day of the shooting, on the next day, or on subsequent days; limiting our sample to stories that include in the text the words "shoot," "kill," both "shoot" and "kill," or "die"; and dropping accidental shootings in the civilian stories, dropping police killings flagged as involving retired or off-duty officers, and dropping police killings flagged in the GVA as "suicide by cop"; and splitting our sample by whether a news story is above or below the median length. The results are unchanged in these additional robustness checks.

IV.C. Heterogeneity by Victim Characteristics

Discussions on policing in the United States, particularly police killings, are often linked to the societal treatment of Black civilians (Logan and Meyers 2022; Mason, Myers, and Simms 2022). Therefore, it is essential to assess which incident characteristics are associated with higher levels of obfuscation. We begin by exploring how incident characteristics correlate with the use of obfuscation (Online Appendix Figure D.4). We focus on victim race and gender. We split the sample from our main analyses along these characteristics.

We find that the point estimates for the level of obfuscation are smallest for Black victims and largest for white victims, suggesting that there is less obfuscation for cases involving the deaths of Black individuals. However, caution is merited in interpreting this finding, as the 95% confidence intervals indicate that we cannot reject that the coefficients are not statistically different from each other. Moreover, we find that incidents involving female victims show a level of obfuscation twice as large as that of their counterparts involving male victims.

IV.D. Supporting Evidence from Newspapers

Is the obfuscation exclusive to television coverage of police killings, or does it manifest across various media platforms? To provide some insight into this question, we conduct a comprehensive analysis of the use of obfuscatory language in U.S. newspapers.

We collected newspaper coverage of police and civilian killings in the United States from NexisUni, spanning 2013 to 2019. The sample includes news stories sourced from 166 outlets, ranging from nationwide publications such as the *New York Times* to midsized local papers such as the *Chicago Daily Herald* and smaller sources such as the *Bakersfield Californian*. We apply the same sample restrictions as those described for the TV stories in Section III.B. The newspaper sample contains approximately 49,000 stories on 4,915 incidents (2,792 police; 2,123 civilian). Online Appendix Table E.2 provides descriptive statistics for this sample; the characteristics of victims and incidents mirror those in our primary TV sample.

Our analytical approach mirrors the methodology used in the study of broadcast news reports. We measure different levels of obfuscation overall and in the first sentences of newspaper

stories, and we compute the differential obfuscation for police versus civilian killings. Our results are presented in Online Appendix Table E.2. Similarly to the case for TV broadcasts, our analysis shows that across most measures, newspaper articles exhibit a significantly higher propensity to employ obfuscatory language when a police officer is the perpetrator than when the perpetrator is a civilian. There is one exception: the use of nominalizations, which is more prevalent in printed press narratives pertaining to civilian killings. This could stem from differences between oral and written language in commonly used phrases. If we set aside this difference, the magnitude of the outcomes remains notably consistent between newspapers and broadcast news reports. This analysis suggests that the use of obfuscatory language to describe police killings is not exclusive to television news but rather extends across the broader spectrum of news media.

V. Effects of Obfuscatory Language

The analysis presented in Section IV reveals the systematic use of more obfuscatory language in broadcast news coverage of police killings than in reporting on civilian homicides. Does this matter in practice, however? It could be argued that the sentences "a police officer shot and killed a man" and "a man died in an officer-involved shooting" contain the same information. Does the difference in language influence how viewers or readers understand and respond to a news story?

To answer this question, we pursue two complementary lines of analysis. First, we use a large, nationally representative survey to examine how stated support for police funding varies with the language used in recent media coverage of police killings. This analysis exploits variation in local media coverage around the exact date when the respondent took the survey. The results provide motivating evidence from the field that obfuscation in media coverage affects attitudes about policing.

Our second line of analysis relies on an online experiment that examines how the sentence structure used to describe a police killing influences a respondent's perception of the officer's moral responsibility, their demand for accountability, their broader support for police reform, and how they later retell the story. The strength of this experimental study is that the design can be tightly controlled to isolate the effect of language from the

effects of any other aspects of an event or its media coverage. The results of this analysis provide clear evidence that obfuscatory language affects respondents' perceptions and judgment regarding the incident and their subsequent policy preferences.

V.A. *Obfuscation and Support for Police Funding: Descriptive Evidence from the CES*

1. *Data Source and Sample Selection.* To study how obfuscation relates to perceptions of policing in a field setting, we link data from the Cooperative Election Study, a biennial, nationally representative survey, with our primary broadcast news data set. Specifically, we use data from the postelection waves of the CES conducted in November from 2014 to 2018 (Kuriwaki 2023; Schaffner, Ansolabehere, and Shih 2023). Respondents provide information on demographic characteristics, political orientation, education, employment status, and marital status. The survey includes a question on law enforcement funding that asks whether they support state legislatures in "greatly increasing," "slightly increasing," "maintaining," "slightly decreasing," or "greatly decreasing" financial allocations to law enforcement.

We match the CES data from 2014, 2016, and 2018 with our measures of media coverage of police killings based on the media market (DMA) of the respondent's residence at the time of survey participation. We limit our analysis sample to respondents who live in a DMA where there was at least one police killing covered on television on the same day or the day before the respondent took the survey. In this way, we isolate the effects of obfuscation, conditional on there having been media coverage of a police killing. Our main sample has 23,126 CES respondents; Online Appendix Table E.4 presents sociodemographic characteristics of the respondents in our sample. There are no notable differences in terms of gender, race, ethnicity, age, or ideology across levels of obfuscation for stories about police killings on TV on the day before the survey was completed.

2. *Empirical Strategy.* Because of the survey's extensive scope, the data collection occurred over multiple days. This results in quasi-random within-DMA variation in media content on the date when an individual happened to have responded to the

survey.[22] For each respondent i residing in DMA d and exposed to the level of obfuscation on date t, support for more police funding is given by

$$(2) \qquad Support_{idt} = \beta_t Obfuscation_{d,t} + \beta_2 X_i + \gamma_d + \epsilon_{idt}.$$

In this equation, $Support_{idt}$ is an ordinal variable ranging from one to five, where one corresponds to "greatly decreasing" and five to "greatly increasing" financial allocations to law enforcement. We include in the analysis media-market fixed effects, γ_d, and a vector of controls, X_i, including a survey-year fixed effect and the respondent's age, gender, race, political leaning, education level, and marital and employment statuses. Last, we control for the number of sentences in police-related stories and for whether a police incident occurred on the same day as a killing within the DMA on date t. The error term is captured by ϵ_{idt}, and standard errors are clustered at the DMA level. The variable of interest, $Obfuscation_{dt}$, captures the share of obfuscation in local broadcast news coverage on date t.

3. *Results.* Table V, Panel A presents the correlation between obfuscation and public sentiment toward police funding. Following the main analyses in Table III, the first two columns use the share of sentences with any kind of obfuscation as the measure of media obfuscation; the last two columns use the share of sentences with no specific agent instead. All specifications include survey-year fixed effects and controls for story length, whether the news story is about a killing that took place the day of or the day before (versus an earlier day), and media-market fixed effects; the even columns add controls for respondent characteristics.

The resulting estimates are consistent across specifications: conditional on the media covering a police killing, obfuscation is positively correlated with support for police funding. For example, the estimates in columns (2) and (4) suggest that a 10 percentage point increase in obfuscation is associated with an increase in public support for augmenting police funding by 9.5% (for *Any obfuscation*) and 14.8% (for *No explicit agent*). These results indicate that media obfuscation and ambiguous narratives in the

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22. Similar approaches are used in Sharkey (2010) and Philippe and Ouss (2018), which both exploit variation in the timing of when large-scale surveys are taken relative to local events and media stories.

TABLE V

OBFUSCATION AND SUPPORT FOR POLICE FUNDING: SURVEY EVIDENCE

	Outcome: Support for police funding			
	(1)	(2)	(3)	(4)
Panel A: Pre-survey police shooting				
Share of obfuscation	0.041*	0.034**		
	(0.025)	(0.016)		
No explicit agent			0.056**	0.053***
			(0.022)	(0.014)
Mean of dep.	3.59	3.59	3.59	3.59
Observations	45,584	45,584	45,584	45,584
Panel B: Post-survey police shooting (placebo)				
Share of obfuscation	0.022	0.008		
	(0.015)	(0.006)		
No explicit agent			0.025	0.003
			(0.021)	(0.008)
Mean of dep.	3.59	3.59	3.59	3.59
Observations	157,318	157,318	157,318	157,318
DMA fixed effects	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes

Notes. This table analyzes the effect of obfuscation on public support for police funding, focusing on changes in financial commitments to police departments. The dependent variable measures these changes on an ordinal scale ranging from 1 (greatly decreasing) to 5 (greatly increasing). Panel A correlates survey responses to obfuscation in stories on police killings aired before the survey was administered. Panel B offers a placebo test by examining obfuscation in reporting on police killings after the survey. Standard errors, presented in parentheses, are clustered at the DMA level. * $p < .1$, ** $p < .05$, *** $p < .001$. Source: NE and CES.

coverage of police killings may shape public sentiment in a manner that favors continued support for law enforcement funding.

4. *Placebo Test.* To explore whether this finding may be spurious, we conduct a placebo test examining obfuscation in media coverage of police killings that occurred in the seven days after the respondent answered the survey. The idea is that post-survey obfuscation should have no effect on responses. Table V, Panel B presents these estimates. The results imply no systematic correlation between obfuscation in stories about police killings the week after the survey was taken and survey-respondent support for policing.

Our analysis of the CES has the advantage of exploiting actual variation in obfuscation in media coverage. However, there are several limitations of this analysis. The CES was not designed with the primary intent of measuring people's perceptions of policing, nor is the relevant subsample very large, leading to somewhat imprecise estimates. We do not have information about

whether survey participants watched TV on the days leading up to the survey responses. Most important, the incidents and corresponding stories may vary along other dimensions that are both correlated with the level of obfuscation and directly affect public perceptions (for example, variation in the nature of events or in the details included in the story). Motivated by these potential concerns, we conducted an online survey, the results of which we describe next. The key advantage of the experiment is that it allows us to precisely control exposure to the obfuscatory structures themselves.

V.B. Obfuscation and Perceptions of Policing: Lab Experiment

1. *Experimental Design.* We conducted an online experiment with 2,402 participants in March 2022 using Prolific. Our hypotheses and research and analysis design were registered on the AEA registry (no. AEARCTR-0009052). Participants were required to reside in the United States and to be adults fluent in English.[23]

We presented participants with a story (a headline sentence plus four sentences providing further detail) about a police killing.[24] Participants all read about the same incident but were randomly assigned to variations in how it was described using a 4 × 2 design. The first level of randomization was for obfuscatory structure. Participants were randomized into one of four structures: (i) *Active*, (ii) *Passive*, (iii) *No agent + Nominalization*, and (iv) *Intransitive + Nominalization*.[25] We note that unlike our media analyses, we do not have *No agent* and *Intransitive* alone;

23. The survey took on average six minutes to complete, and participants were paid $1.70 to participate. Online Appendix Table E.5 presents balance tables that confirm that randomization worked properly.

24. The story reflects a real incident, but we anonymized the information about the person and city involved to make sure that participants were not influenced by any prior knowledge of the incident. We note that our main media analysis uses data on TV news stories, but in our lab experiment, to isolate one causal channel and in order not to capture differences in voice or tone, we use a written support. However, our results are similar when we analyze text used in the print press. In addition, we obtained TV images maintained by NE for a convenience sample from April to June 2023. Online Appendix Table C.1 shows no notable differences in newscast images by level of obfuscation. We provide more details on how we process these images in Online Appendix C.

25. Note that we did not provide any information on the officer's or victim's race because this was not part of our media analyses. This could be an interesting dimension to investigate in future research.

TABLE VI

ONLINE EXPERIMENT: FIRST SENTENCE OF NEWS STORY FOR EACH NARRATIVE
TREATMENT ARM

Narrative treatment arm	Headline
Active	A police officer killed a 52-year-old man on Friday night.
Passive	A 52-year-old man was killed by a police officer on Friday night.
No agent + nominalization	A 52-year-old man was killed in an officer-involved shooting on Friday night.
Intransitive + nominalization	A 52-year-old man died in an officer-involved shooting on Friday night.

instead, we also include the language "officer-involved shooting" in the story. This is because, in the context of our experiment, readers would not be able to infer anything about police presence from pure "no agent" stories ("a person was killed") or pure "intransitive" stories ("a person died"). We hypothesize that, if anything, relative to the four structures we study in our media analyses, the range of sentence structures considered in our experiment show a lower degree of contrast in their clarity of meaning.

Table VI provides the headline sentence used in these sentence-structure treatment arms with the full prompts available in Online Appendix B.1. We categorize sentences with structure (ii), (iii), or (iv) as having *Any obfuscation* and sentences with structure (iii) or (iv) as having *No explicit agent*. The second level of randomization determined whether a clause stating that the man killed "was reportedly armed" was included in the story.

We are interested in understanding how the sentence structure influences three broad sets of outcomes. First, does it influence how someone understands and judges the specific event being described? We ask participants questions on their perceptions of the officer's moral responsibility for the civilian's death and demand for penalties for the officer. Second, does it alter participants' broader understanding of policing harms and their support for police reform? To evaluate this question, we ask respondents how they would like to split a potential $100 donation between two organizations: one supporting officer well-being and the other supporting police reform. We use donations to the latter as our primary measure of support for reform. Finally, does the sentence structure affect how respondents recall and retell the

Percent difference, relative to Active sentence structure
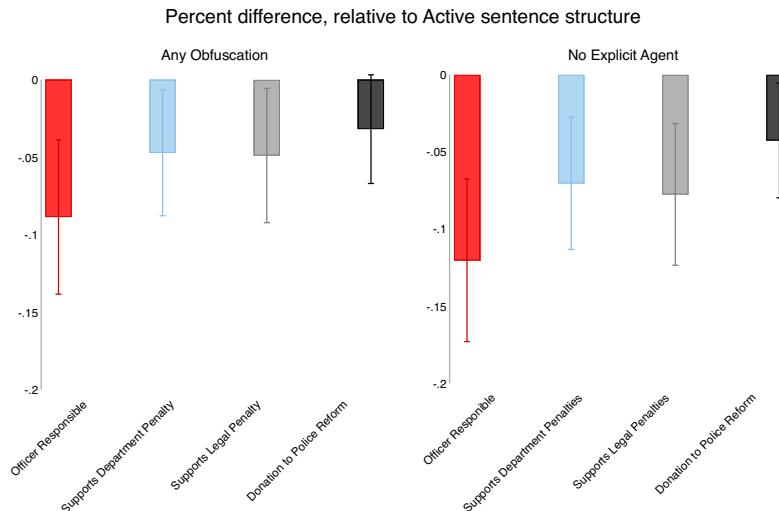
FIGURE I

Obfuscation and Perceptions of Policing: Online Experiment

This figure shows differences in perceptions of officer responsibility, support for departmental and legal penalties, and donations to police reform across varying levels of obfuscation based on data from our online experiment. We plot the coefficients in Online Appendix Table E.6 and E.9 as a percentage of the mean obfuscation in the control group. Data sources: GVA, MPV, and NE.

story? We study this by measuring both the information content (i.e., whether they report that a police officer was responsible for the killing) and sentence structure used by participants in their recounting of the story at the end of the experiment. Our exact questions can be found in Online Appendix B.2.

We hypothesize that obfuscation matters—that is, respondents are less likely to consider the officer morally responsible, demand accountability, and support police reform when the news story presents some obfuscation than when the report is delivered in active voice. In addition, we hypothesize that the degree of obfuscation is important: the greater the obfuscation, the less likely people are to assign responsibility, demand accountability, or support reform. Last, we hypothesize that these effects are strongest if we do not specify that the victim was armed.

2. *Experimental Results.*

i. Judgments About Officer's Actions. Figure I and Online Appendix Table E.6 present the main results of the

experiment. The table presents our primary outcomes of interest: whether the officer is morally responsible for the killing (columns (1)–(3)), support for penalties for the officer from their police department (columns (4)–(6)) and support for broader legal penalties for the officer (columns (7)–(9)). For each outcome, the three columns present the effect of (i) *Any obfuscation*, (ii) *No explicit agent*, (iii) *Passive*, *No agent*, and *Intransitive*, using *Active* as the reference group for all analyses. Figure I presents the aggregate estimates as a share of the mean obfuscation in the control group.

In line with our main hypothesis, how the story is told matters for perceptions of what happened. In particular, removing the mention of an explicit agent reduces perceptions of an officer's responsibility and demand for penalties. The *No explicit agent* treatment decreases the share responding that the officer was morally responsible by 13% (9 percentage points, $p < .001$) and decreases the stated preference for departmental penalties by 7% ($p = .001$) and for legal penalties by 8% ($p < .001$). In contrast, we find no significant differences across the three measurements between the *Passive* and *Active* arms. As a result, the statistical significance of *Any obfuscation* rises to only the 10% level for the outcomes related to demanding penalties for the officer.

We also hypothesize that specifying whether the victim was armed substantially influences respondents' perceptions of whether the officer's actions were justified. We find this to be the case, as shown in Online Appendix Table E.7. Respondents are 13% (9 percentage points) less likely to say that the officer is morally responsible for the victim's death when the story specifies that the victim was armed. Participants are also 19% and 22% less likely to agree that the officer should face penalties within the department or legal penalties, respectively.

In addition to the independent effects of sentence structure and the presence of a weapon on participants' responses, we propose a third hypothesis related to the interaction of the two treatments. In particular, we conjecture that obfuscatory sentence structures are especially effective when the story does not mention a weapon. This hypothesis is based on the idea that the presence of a weapon would lead some participants to determine that the shooting was justified regardless of how the information is presented in the story. In economic terms, we hypothesize that the presence of a weapon and obfuscation may be substitutes when it comes to officer responsibility: perceptions of responsibility can

be dampened by contextual features or, in the absence of these more favorable features, by how a story is told. To examine this hypothesis, Online Appendix Table E.8 breaks down the analysis presented in Online Appendix Table E.6 by whether the story includes (Panel B) or does not include (Panel A) a clause stating that the decedent "was reportedly armed."

In line with our hypothesis, the point estimates are greater in magnitude for all 15 effects related to the use of obfuscatory language reported in each panel when the story omits any mention of a weapon, though we note that the differences are not significant at conventional levels. In the absence of information about a weapon, the estimated effects are especially large when the story does not explicitly identify an agent (*No agent* and *Intransitive*). The estimated effects are also negative for the *Passive* treatment in this case but still mostly do not rise to statistical significance at conventional levels. Overall, the estimated effect of *Any obfuscation* and *No explicit agent* are negative and statistically significant for all three outcomes when the story does not mention the potential presence of a weapon. In contrast, the estimated effects for *Any obfuscation* are much smaller in magnitude and not statistically significant when the story states that the decedent was reportedly armed.

Online Appendix Table E.10 shows similar patterns for two additional outcomes: whether the respondent thinks that the officer was justified in shooting the person and whether the respondent thinks that the officer was depicted negatively in the story. We find that—especially for stories that do not mention a weapon—more obfuscation increases the perception that the officer was justified in shooting and decreases feelings that the officer was negatively depicted.

ii. Broader Perceptions of Policing Harms and Demand for Reform. Next, we investigate how the sentence structure affects broader perceptions of policing harms and demand for reform beyond the perceptions related to the focal incident. Columns (1)–(3) in Online Appendix Table E.9 present results on how sentence structure influences participants' intended donations to a nonprofit focused on police reform (as opposed to one focused on officer well-being), and columns (4)–(6) report analogous results for participants' estimates of the prevalence of police killings in the United States. The point estimates for donations are negative but generally smaller in magnitude than those related to the participants' judgments about the specific event shown in

Online Appendix Table E.6. In this case, the sentence structure with *No explicit agent* reduces donations by approximately 4% (2.5 percentage points), while the use of *Passive* voice continues to have negligible effects. Interestingly, the use of more obfuscatory sentence structures also tends to reduce participants' estimates of the number of annual police killings in the United States. This suggests that some of the decline in support for reform may arise from a reduced salience of police killings as a social issue when obfuscatory language is used in the story. These results also echo those from our field study, presented in Section V.A, in which we find less support for police funding just after more obfuscatory media coverage of police killings.

iii. Informational Content. The use of obfuscatory sentence structures could potentially affect perceptions and judgments about the police killing described in our experiment in multiple ways. A key distinction is whether the fundamental information about the incident that participants take away from the story is altered or whether the information is the same but it is processed differently.[26] The latter could occur, for example, if more active language leads readers to develop a more vivid picture of what happened or evokes a stronger emotional response.

To shed some light on these possible mechanisms, we explore whether differences in sentence structure affect how people recall and/or retell the story. At the end of the survey, we asked participants to retell the news story that they had read in their own words. For half of our sample, two research assistants, who were unaware of which treatment arms the responses corresponded to, coded the sentence content to determine whether the respondent explicitly said that the police officer had killed or shot a person.[27]

The results are presented in Table VII, column (1). In the *Active* treatment arm, the vast majority of the respondents explicitly

26. Our conjecture that viewers may take away different information content is motivated by the fact that the information transmitted across the four treatment arms of the experiment is not equivalent. While the *Active* ("the police officer killed the man") and *Passive* ("the man was killed by the police officer") transmit clearly who the agent and the patient are and what the action is (albeit in a different order), the agent is not clear in the *No agent* syntax ("the man was killed in an officer-involved shooting"), and neither the agent nor the causal action are fully specified in the *Intransitive* syntax ("the man died in an officer-involved shooting").

27. The two coders agreed on the categorization of 85% of the sentences. Our team recoded those that they disagreed on.

TABLE VII

ONLINE EXPERIMENT: PARTICIPANTS' RETELLING OF THE STORY

	Explicit police shooting (1)	Active voice (2)	No explicit agent (3)
Passive	−0.01	−0.14***	0.02
	(0.03)	(0.04)	(0.03)
No agent + nominalization	−0.02	−0.27***	0.12***
	(0.03)	(0.04)	(0.03)
Intransitive + nominalization	−0.16***	−0.35***	0.22***
	(0.03)	(0.04)	(0.03)
Mean dep. var.	0.92	0.73	0.07
Std. dev. dep. var.	0.26	0.44	0.26
N	1,198	1,198	1,198

Notes. This table presents differences in how an incident is retold across experimental treatment arms. We asked participants to write what they recalled of the news story. We hand-classifed the text to capture whether the respondent explicitly said that a police officer shot or killed the person (column (1)), whether the respondent used active voice (column (2)), and whether there was no agent in the retelling of the killing (column (3)). We report the mean and standard deviation of the dependent variable for the *Active* sentence structure. Standard errors are in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

mentioned the role of the police officer in the killing (92%) in their retelling of the story. Interestingly, this varied little across the *Active*, *Passive*, and *No agent* treatments, all of which use a form of the word "kill," but participants who read the *Intransitive* version of the story were 16 percentage points less likely to identify the police officer as having killed or shot someone. This suggests that the use of intransitive verbs may fundamentally alter the information that viewers take away from the story. Moreover, it suggests that the impact of the *Passive* and *No agent/Nominalization* sentence structures in the experiment is not likely related to participants' understanding of the fundamental information in the story but is likely driven by the response to this information that the sentence structure evoked.

iv. Language Transmission. We use the participants' open-ended retelling of the story to explore a final question related to the impact of sentence structure: is obfuscatory language retransmitted when information is shared with others? In evaluating the survey responses to answer this question, we measure the respondents' use of obfuscatory sentence structures, presenting these results in Table VII, columns (2) and (3). Strikingly, the estimates reveal that when retelling the story themselves several minutes later, people tend to mimic the sentence structures they read in the original reporting. As shown in column (2), they are

significantly less likely to use the active voice after treatments using any of the obfuscatory sentence structures. The effect sizes are increasing with our ex ante expected gradient of obfuscation: that is, the largest decrease in the use of active voice is generated in the *Intransitive* arm (−35 percentage points), followed by the *No agent* (−27 percentage points) and *Passive* (−14 percentage points) arms. Similarly, column (3) shows that when there was *No explicit agent* in the story, respondents tend to also use sentence structures that do not explicitly acknowledge the police officer as a cause of the killing (+12 percentage points for *No agent* and +22 percentage points for *Intransitive*). Notice that these effects arise even though the phrase "officer-involved shooting" occurs twice in each story, suggesting that many participants do not interpret this phrase to automatically imply that the officer was the shooter. While the implications of this analysis are certainly limited by the short-term nature of the recall exercise in the experiment, the results suggest that there may be broader spillover effects of obfuscatory language structures. They suggest, in particular, that media use of obfuscation may not only affect viewers directly but may also shape the information they subsequently pass on to others.

Our online experiment shows that obfuscation affects the interpretation of the situation, shapes broader perceptions of policy issues, and influences the subsequent retelling of a story.[28] However, there is variation in the importance of obfuscation. Consistently across contexts, nominalizations and failures to include an explicit agent influence all of our measures of perception of a police killing and its social consequences. Using a passive instead of an active voice also matters, but less strongly and not in all cases (e.g., not when we specify that the victim was armed). In other words, the more convoluted the language choice, the greater its impact on what people retain from a news story.

V.C. Differential Obfuscation

Our experimental results show that for any given case of police killings, obfuscation changes audience attitudes most when

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28. Our experiment examines how sentence structures influence perceptions of policing in the current media landscape. We acknowledge that respondents may interpret the information based on prevailing narrative styles. It is possible that more systematic changes in the sentence structures used in the media could lead to different inferences.

TABLE VIII

OBFUSCATION IN NEWS OF POLICE KILLINGS BY WHETHER THE VICTIM WAS ALLEGEDLY ARMED

Dimension of obfuscation	All sentences		First sentence	
	Any (1)	No explicit agent (2)	Any (3)	No explicit agent (4)
Panel A: Unknown or no reported weapon for victim of police shooting				
Police killing	0.130***	0.058***	0.176***	0.078***
	(0.011)	(0.012)	(0.013)	(0.015)
Observations	201,781	201,781	79,293	79,293
Mean civ. shoot.	0.2935	0.2481	0.2815	0.2072
Panel B: Reported weapon for victim of police shooting				
Police killing	0.058***	0.026***	0.104***	0.067***
	(0.008)	(0.008)	(0.010)	(0.008)
Observations	411,453	411,453	158,591	158,591
Mean civ. shoot.	0.2935	0.2481	0.2815	0.2072
Controls	Story controls + DMA fixed effects			

Notes. This table examines differential obfuscation in stories about police killings relative to stories about civilian killings by whether the victim was allegedly armed, as defined by MPV. Panel A presents estimates for cases where the victim was allegedly unarmed, and Panel B presents those for cases where the victim was allegedly armed. In columns (1) and (2), we include all sentences; in columns (3) and (4), our sample is limited to the first sentence in a news story. Our sample includes incidents and news stories where a suspect was identified for civilian killings. We define "Any obfuscation" as a sentence with passive voice, with no agent, with intransitive verbs, or with nominalizations. We define "No explicit agent" as a sentence that has no agent or has intransitive verbs. See Section II for more details. Standard errors clustered by subject are in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$. *Source*: NE.

the victim is not reported to have a weapon. We explore the extent of differential obfuscation in the news coverage across this dimension and test whether there is higher obfuscation in the cases in which it matters most.

The MPV data include a variable indicating whether the victim was allegedly armed. Using this variable, we break out stories about police killings based on whether the victim was allegedly armed. The results are presented in Table VIII and in Online Appendix Figure D.6. We find that there is indeed more obfuscation for cases where the victim was not allegedly armed. A comparison of the coefficients in Table VIII, Panel A to those in Panel B shows that in fact, there is twice as much obfuscation when the victim is unarmed as when he is allegedly armed. For all the pairwise comparison across the coefficients, the estimates for "No weapon" are larger and statistically different from those

for "Weapon."[29] These are likely to be the kinds of cases where obfuscation might be especially favorable for police officers given the results from our lab experiments.

Beyond the question of whether the victim was armed, various factors can influence perceptions of situations, making them more or less favorable for police officers. There could be a substitution effect in determining officer responsibility based on either sentence structures or incident characteristics. In this case, other factors might similarly diminish perceived officer culpability, thereby reducing the necessity for obfuscation. The following features, measurable in the MPV data, can contribute to a diminished sense of officer responsibility: if the victim was fleeing and if a body-worn camera was absent. Online Appendix Figure D.4 presents estimates for these subgroups. Generally speaking, our findings suggest a discernible pattern of substitution between obfuscation and other elements that diminish relative officer responsibility.

The exact drivers of differential media coverage remain uncertain; it is possible that there are other observed or unobserved differences across incidents where the victim was allegedly armed or not, allegedly fleeing or not, and so on. However, the results presented in this section suggest that obfuscation may be strategically employed to mitigate perceived responsibility in cases that could generate heightened scrutiny of police officers. In the final section, we explore mechanisms to evaluate the role of these different elements.

VI. What Drives Media Obfuscation of Police Killings? Exploring Mechanisms

The analysis presented so far documents the heightened presence of obfuscation in media coverage of police killings relative to reporting on homicides with civilian perpetrators and indicates that these obfuscatory sentence structures significantly affect public perceptions about police killings. This evidence raises a natural follow-up question: what drives the greater use of obfuscation in media coverage of police killings?

Here we explore potential mechanisms that may drive the use of obfuscatory language, and we provide some suggestive

29. The *p*-value is less than .01 for all cases except *No explicit agent*, which has a *p*-value of .03.

empirical tests. Following the literature (Gentzkow, Shapiro, and Stone 2015), we start by distinguishing demand- and supply-driven motivations for obfuscation in the coverage of police killings. In the supply-driven channels, we further differentiate between mechanisms related to a desire on the part of news stations to shape how consumers understand the news, potentially influenced, for example, by the political attitudes of station owners, and mechanisms reflecting the influence of the primary source of information about matters of crime and policing, namely, local police departments.

VI.A. Demand for Obfuscation

Political affiliation is one of the strongest predictors of attitudes toward police, with Republicans exhibiting more trust in the police force and more favorable perceptions of how police conduct their jobs (Jones 2013; Ekins 2016; Brown 2017). If media obfuscation is driven by a desire to support or avoid challenging their audience's views, we might expect to see greater obfuscation for police killings in Republican-leaning media markets. Online Appendix Figure D.7 reports the results of our main analysis of news stories stratified by quartile of Republican vote share in the 2016 presidential election in the media market. We find no evidence of greater obfuscation of police killings in Republican-leaning markets. If anything, we find that obfuscation is more common in Democrat-leaning media markets. Although the differences are not statistically significant, there is approximately 50% greater differential obfuscation in the bottom versus the top quartile of markets ranked by Republican vote share.

The absence of systematic heterogeneity in obfuscation across media markets based on political leaning suggests that demand-side considerations likely play a minor role in sentence-structure choices for television newscasts.

VI.B. Supply of Obfuscation: Station Ownership and Political Leaning

We explore a first supply-side channel for obfuscation: TV station ownership and political leaning. We consider three measures related to political leaning. First, we examine the influence of TV station ownership groups on the use of obfuscatory sentence structures. Previous studies have demonstrated that station ownership has an impact on content, including the topics

covered and political slant of the news (DellaVigna and Kaplan 2007; Martin and Yurukoglu 2017; Cagé et al. 2022; Ash and Poyker 2023). Building on the research of Martin and McCrain (2019) and Mastrorocco and Ornaghi (2020), we focus on ownership by the Sinclair Broadcast Group, recognized as a politically conservative media entity with an extensive portfolio of local news stations.[30] To explore whether Sinclair ownership influences narrative choices, we examine whether there are differences in obfuscation on the basis of Sinclair ownership status across three categories: (i) stations never owned by Sinclair, (ii) those owned by Sinclair when the relevant story was aired, and (iii) those owned by Sinclair eventually but not at the time of airing. We also use an alternative indicator for conservative ownership: the station's ideological slant, as measured by Martin and McCrain (2019). Online Appendix Figure D.7 shows similar levels of obfuscation across these categories of Sinclair ownership status and levels of slant, suggesting little direct effect of conservative station ownership or political leaning on the use of obfuscatory sentence structures.

Finally, we directly compare obfuscation across TV stations. In Online Appendix Figure D.7, we break down our results for national and local TV stations. In Online Appendix Figure D.8, we present estimates for major national TV stations, ordered by viewership composition from liberal to conservative, following the classification by Mitchell et al. (2014). We see no discernible patterns of differential obfuscation either between local and national channels or within national channels across news outlets.

The absence of patterns in heterogeneity across all of these specifications suggests that the political slant of TV stations and their owners is likely not a primary driver of the media use of obfuscatory language for police killings: it is common across all outlet types.

VI.C. Supply of Obfuscation: Primary Sources of Information

Beyond television ownership, another potential supply-side driver of obfuscation lies in the relationship between the media and local police departments, which could influence storytelling. Extensive research in sociology, communications, and

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30. These papers show that Sinclair ownership not only affects the topics covered and political bias but also leads to a decline in violent-crime clearance rates because of reduced coverage of local police activities.

criminology has highlighted how law enforcement agencies disseminate information and images to the media and the communication strategies they use to enhance their public image (Chermak and Weiss 2005; Mawby 2010, 2013; Colbran 2020).[31] Relatedly, Baron (2006) puts forth a theory on media bias stemming from private information accessed by journalists, and Shapiro (2016) develops a model showing how special interest groups can influence journalists' presentation of policy-relevant information. Police departments could play such roles. This body of work concentrates on the kinds of information that police provide to news outlets, such as details regarding crimes or ongoing investigations, rather than on language or grammatical choices.

We study whether the language used by police departments in their accounts of events surrounding police killings influences the sentence structures used in news media coverage of the same incidents. To explore this, we collect data from the documents that many police departments issue after incidents in which police firearms are discharged. These so-called OIS reports provide an official police department account of the circumstances surrounding such incidents. Matching these OIS reports on police killings to news coverage of the same incidents, we estimate a series of regressions to test whether the use of obfuscatory structures in police reports is reflected in local news media coverage.

To compile OIS records, we rank police departments based on their size. Focusing on the top-25 police departments, we investigate whether any OIS documentation exists on the respective department websites. We identify such records for six departments: Los Angeles, Houston, Philadelphia, Dallas, San Francisco, and Louisville, KY.[32] Other departments either lacked an OIS-specific page or their OIS data do not include narratives (as exemplified by the NYPD). For the identified cities, we gather information on the date, city, and narrative content of each incident and matched these events to the MPV data set. We successfully locate official police narratives for 105 individuals, representing approximately half of the police killings in these cities during our sample period.

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31. More recently, scholars have studied how citizen journalism can change these dynamics (Greer and McLaughlin 2010; Denef, Bayerl, and Kaptein 2013) and how police departments use social media to shape perceptions (Heverin and Zach 2010; Grunwald, Nyarko, and Rappaport 2022).

32. Phoenix also has such documentation, but only after 2019, which falls outside our study period.

TABLE IX

CORRELATION BETWEEN POLICE OBFUSCATION AND MEDIA OBFUSCATION

	Sentence		Story	
	(1)	(2)	(3)	(4)
Panel A: Any obfuscation				
	(Mean = 0.3665)		(Mean = 0.6091)	
Police obf. (any)	0.133**		0.102	
	(0.065)		(0.079)	
Police obf. (any) × 1 (same DMA = 0)		0.104*		0.022
		(0.059)		(0.075)
Police obf. (any) × 1 (same DMA = 1)		0.197**		0.265**
		(0.079)		(0.123)
Panel B: No explicit agent				
	(Mean = 0.2954)		(Mean = 0.5249)	
Police obf. (no explicit agent)	0.216***		0.253**	
	(0.068)		(0.096)	
Police obf. (no explicit agent) × 1 (same DMA = 0)		0.184**		0.169*
		(0.070)		(0.097)
Police obf. (no explicit agent) × 1 (same DMA = 1)		0.273***		0.409***
		(0.083)		(0.130)
Police department fixed effects	X	X	X	X
Year fixed effects	X	X	X	X
DMA fixed effects	X	X	X	X
Observations	2,840	2,840	1,366	1,366

Notes. In this table, we show the correlation between the obfuscation of OIS reports and of news reports for the same police killing. The sample includes police killings from the six departments with public OIS reports, where we could identify the incident in the MPV data and locate at least one related news story. We obtain 1,366 stories and 2,840 sentences for 60 subjects. Police obfuscation is measured as the average obfuscation in sentences about the killing. When police obfuscation is interacted, the dummy for *SameDMA* is always included. Standard errors clustered by subject are in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$. Source: NE.

Our main NE data set has stories for 60 of these incidents, and they are associated with 1,366 TV news stories and 2,840 distinct sentences. For all matched stories, we compute the obfuscation in the police narratives using the same methodology that we use for television coverage.

Table IX presents estimates of regressions at the sentence level that relate the use of obfuscation in media coverage of police killings to obfuscation in the official police OIS reports. The estimates in the first column of each panel, which include year and police department fixed effects, show that more obfuscation in police reports is associated with more obfuscation in media coverage of the same incident. In other words, how a police department describes an incident is highly correlated with how it

is covered on television. Importantly, because police department fixed effects are included in these specifications, the results imply that the sentence structures used by the same department across different police killings is directly mirrored in the associated media coverage of these events. These results suggest that the news media may rely fairly directly on department narratives for their own reporting.

The second column of each panel interacts the measure of police obfuscation with an indicator for whether the TV news station is in the same media market as the police department. The point estimates are greater in magnitude for stations in the same market, consistent with the idea that local news stations may be especially likely to echo the language used by local police departments. The estimates are also generally positive and significant for stations outside the local market, suggesting that police department accounts of events may ultimately influence how a specific incident is described in broader media circles. Although not definitive, these results suggest that how local police departments represent their actions likely constitutes an important mechanism influencing the prevalence of obfuscation in television stories.

Finally, it is worth noting that many of the results from the heterogeneity analysis presented in Section V.C are also consistent with obfuscation originating from police departments as a way of defusing potential blame or criticism in cases that may be viewed more negatively by the public. Specifically, we saw in Table VIII and in Online Appendix Figure D.4 that there is more differential obfuscation for police killings in which the victim did not have a weapon, when the victim was not fleeing and when there is body-worn camera footage. There are many reasons this may be the case, and one potential explanation is that police departments may be especially likely to obfuscate in cases that might be viewed as more likely to lead to public outcry, given that high-profile incidents of police killings might change oversight, reform, or support for police.[33] Likewise, although not statistically significant, the higher obfuscation in Democrat-leaning media markets might indicate that audiences in these

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33. See Prendergast (2001), Shi (2009), Ba and Rivera (2019), Cunningham and Gillezeau (2021), Premkumar (2019), Devi and Fryer (2020), and Ang et al. (2021).

areas are more willing to hold the police accountable after a police killing, thus leading police departments in these areas to use greater obfuscation.

Though not conclusive, our analyses of potential mechanisms suggest that neither demand-side nor television channel–level supply-side factors explain the increased obfuscation in media coverage of police killings. Instead, our findings point to police departments themselves as a more likely origin of obfuscation. Particularly in smaller local newsrooms constrained by limited resources (George and Waldfogel 2006), reliance on accounts of an incident provided by local police departments (Cagé, Hervé, and Viaud 2020) or the need to form and maintain relationships with local police departments could be a key driver behind the media's choice of language in news broadcasts and, ultimately, its role in obscuring responsibility following police killings.

VII. Conclusion

The main aim of this article is to provide new empirical and experimental evidence on two interrelated questions that have received a great deal of attention in recent years: whether there is systematic obfuscation of responsibility in media coverage of police killings and, if so, whether this matters for perceptions of both the incident in question and the potential harms from policing more generally (Cheng 2021). To answer these questions, we collected comprehensive data on police killings, civilian homicides, and TV news coverage in the United States covering the period 2013 to 2019; we gathered survey evidence on support for police funding; and we conducted an online experiment in which we varied the sentence structure used to report a story about a police killing.

Our results provide clear and robust evidence on both questions. First, we document that there is more obfuscation in reporting on killings when an officer was responsible than in coverage of civilian homicides for which the media faced a similar choice of language. The use of obfuscatory language is especially common in the story's lede, which is most salient to viewers. Second, we show that obfuscation matters. Survey respondents are more likely to support police funding in the aftermath of a police killing if they were exposed to more obfuscatory coverage of this event. In our experiment, we find that respondents' assessment of the situation varies with the degree of obfuscation. They are

less likely to think that the officer is morally responsible and to ask for penalties when there is obfuscation—all the more so when we do not specify that the civilian was armed. Prompted by the experimental results, we ask a third question: whether there is differential obfuscation in cases where it might especially benefit the police—for example, in cases when the victim was not armed or when body camera footage is available. We find a doubling of the use of obfuscation in such cases. Our findings align with research in social psychology indicating that positioning oneself as a moral patient rather than a moral agent restricts the perception of moral responsibility (Gray and Wegner 2009; Waytz et al. 2010; Gray, Young, and Waytz 2012). Our study indicates that even subtle alterations in sentence structures have the potential to influence perceptions of moral agency—a promising area for further investigation.

In the last part of the article, we ask what drives obfuscation. We consider several potential motivations that TV news channels and newspapers might have for using obfuscatory language. We distinguish demand- and supply-driven motivations and, then, in the supply-driven mechanisms, we distinguish mechanisms related to a desire to shape how consumers understand the news (e.g., due to the political attitudes of station owners) and to an echoing of the primary source of information (e.g., the local police department). Our evidence is most consistent with the last channel. This is important because our results indicate that the sentence structures used by media outlets affect how the public understands the harms of policing more generally and the extent to which it supports police accountability and reform. These broader effects of language are important given the growing discussion on policy changes and reforms that society might implement to improve public safety (Akbar 2020; Bursztyn et al. 2020) in light of the significant negative externalities of police violence on cities and individuals (DiPasquale and Glaeser 1998; Cunningham and Gillezeau 2021; Ang 2021; González and Prem 2024). Many questions on the origins of obfuscation remain. Documenting when terms such as "officer-involved" began to be widely used by the media and whether, for example, the use of obfuscatory language in police press conferences and press releases spills over directly to the language used by the local media is a promising avenue for future research.

Finally, while our analysis focuses on language choices in the media's coverage of police killings, our approach, studying

the scale and consequences of obfuscation, provides a practical and broadly applicable framework for examining similar issues in other topics covered in news outlets (such as TV, newspapers, or radio) or on social media. For example, how do media cover different forms of interpersonal violence, and how does this influence perceptions of responsibility and support for policy change? Beyond the crime and criminal-justice space, how stories are told might also matter for many other economic and social issues, such as income inequality, immigration, climate change, and health. This analysis could also easily be extended to study the language structures used by a wider set of actors—such as political speech, corporate messaging, and social media influencers—broadening our focus on traditional media.

SUPPLEMENTARY MATERIAL

An Online Appendix for this article can be found at *The Quarterly Journal of Economics* online.

DATA AVAILABILITY

The data underlying this article are available in the Harvard Dataverse, https://doi.org/10.7910/DVN/D42MX9 (Moreno-Medina et al. 2025).

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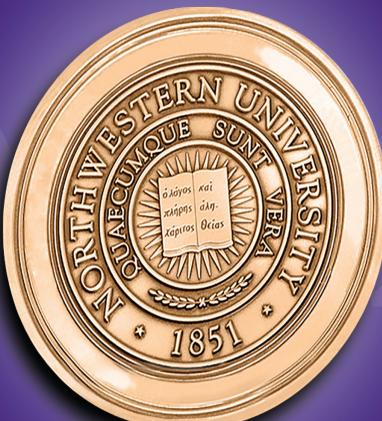
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