Long and short title: The Political Effects of Opioid Addiction Frames

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Abstract: Unlike media coverage of previous drug epidemics, coverage of opioids focuses on Whites and is often sympathetic. Treatment policies garner widespread support. Does sympathetic coverage of Whites cause support for public health over punishment? Does sympathetic coverage of Blacks have the same effect, or is sympathy racially selective? Prior research neglects these questions, focusing on negative messages about nonwhites. In preregistered experiments, including a national population-based survey, we vary both valence and race using fully-controlled yet realistic news stories. Sympathetic frames of White and Black users both increase White support for treatment, but the former has larger effects. This racially selective sympathy is explained by racial attitudes. Unsympathetic frames have no effects, pointing to the limits of racial antipathy. Sympathetic stories about Blacks’ stigmatized behavior can increase support for assistance over punishment, but the weaker effect highlights the importance of racially selective sympathy as a distinct concept from racial antipathy.

Key words: Racial attitudes; drugs; public health; media frame; racially selective sympathy

Appendices: Supplemental materials for this article are available in an online appendix.

Data and replication: Replication files are available in the JOP Dataverse (https://dataverse.harvard.edu/dataverse/jop). The empirical analysis has been successfully replicated by the JOP data analyst.

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Human-participants statement: This research involves human subjects. It was approved by the Princeton University IRB (Protocol #11153) and conducted in compliance with relevant guidelines.

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Drug overdoses are a leading cause of accidental death in the United States and the leading cause of death for those under 50 (CDC 2021a, CDC 2021b). Most of those deaths are from opioids (CDC 2021c). Opioid deaths have increased dramatically, by almost six times since 1999 (CDC 2021c). The sheer scale and rapid increase of opioid abuse make it an important problem worthy of research.

There is an additional reason to understand the politics of the opioid crisis. Unlike many other social problems, including previous drug epidemics, opioid abuse is generally viewed as a public health problem afflicting White victims who deserve treatment, rather than a social disorder perpetrated by nonwhite criminals who deserve punishment (Collins 2019; Provine 2011; Reinarman and Levine 1989). Media coverage portrays the problem with a sympathetic, positive valence – addiction happens to good people who are not to blame – and as disproportionately affecting White Americans (Brown and Tucker-Seeley 2018; Cohen 2015; Seelye 2015). Public views may be sympathetic as a result.

How does the valence and racial framing of opioid abuse influence policy views? Does sympathetic framing of White and nonwhite users elicit equal support for treatment policy?

Because media coverage is simultaneously sympathetic and racialized, it has been difficult to know if the White ‘face’ – or the sympathetic framing – of opioid abuse causes support for treatment over punishment. It is possible that race matters more than valence. That is, perhaps social problems appearing to afflict White Americans elicit assistance, while those appearing to afflict nonwhites elicit punitiveness, regardless of how sympathetically the afflicted are portrayed (Jardina 2019). Alternatively, sympathetic valence may matter regardless of the racial ‘face’ of the problem. That is, perhaps sympathetic frames increase political support for Black and White users equally. A third possibility is racially selective sympathy. Sympathetic
frames may increase political support more when they portray White than Black protagonists. Finally, perhaps neither the racial ‘face’ nor the valence of frames matters. As we will discuss, a handful of studies partially examine these hypotheses, but none fully test them.

This study does so, using two randomized survey experiments, including one with a large, probability-based, nationally representative sample. By varying both valence and race, the study can separate their effects and test their interactive impact to assess racially selective sympathy. The design has two additional advantages. It avoids the common problem of biased treatment estimates from observational mediating variables. Specifically, it varies a key mediating variable for the effect of racialized coverage – the valence of the coverage. It also improves on the standard experiment, which uses stylized vignettes. Instead, it constructs vivid news stories closely modelled on actual news stories yet identical across conditions. The power of mass communication lies partly in its ability to engage and immerse the audience in a compelling narrative. Yet few experiments construct such ecologically valid treatments.

To test whether the White ‘face’ of the problem generates more sympathy, we focus on the responses of White Americans, in keeping with the literature on racial bias (e.g., Tesler 2012). Following studies of racial attitudes, we examine whether racial or political predispositions moderate the racial treatment effects (Banks 2014; Gilens 1999; Tesler and Sears 2010; Valentino, Hutchings, and White 2002).

We find that sympathetic frames increase White support for treatment policy and for a candidate who advocates it. This finding holds both when the frame portrays White users and Black users. By contrast, unsympathetic frames of White or Black users do not affect political views. This finding underscores the neglected importance of sympathetic frames in the definition of public problems. Media may influence public choices not only by focusing on the depravity of
morally culpable people who inflict harm – an unsympathetic frame – but also on the suffering of morally innocent people who are harmed – a sympathetic frame. The same group of people may be constructed either way, and this construction matters. Moreover, sympathetic frames can elicit White support for treatment even for a social problem affecting African Americans engaged in stigmatized behavior. This finding stands out in a literature focused on negative frames of minoritized populations, whether the issue is drug use or other stigmatized behavior.

While White sympathy does extend to Black users, it is nevertheless racially selective. Sympathetic frames increase support for treatment policy more strongly when portraying drug users as White rather than Black. This is the first experiment we know of to report that support for policy assistance comes more easily for White than Black Americans with an identical sympathetic portrayal.

This research extends the broader literature on race and framing in two ways. First, the isolation of sympathy as a framing device contributes to studies of framing (Chong and Druckman 2007). Sympathetic framing goes beyond attributions of a problem to individuals (“episodic”) or to a situation (“thematic”) (Iyengar 1991). Episodic frames are not always negatively valenced, nor thematic frames always positive. That is, valence is a conceptually distinct variable from attributional frames and thus warrants attention. Second, racialized problems such as poverty and crime have largely been studied through unsympathetic frames; little is known about sympathetic frames. Yet racialized political views rest not only on unsympathetic frames of nonwhites, but on weaker political responses to sympathetic frames of these groups. Racially selective sympathy may help explain policies ranging from social security (Winter 2006) to housing assistance (Strolovitch 2022), which rest on positive frames of White Americans.
War on Black crack users, treatment for White opioid “victims”

Much of the literature on drug abuse focuses on the racial impact of the “War on Drugs,” a punitive policy response to crack-cocaine, a drug disproportionately used by urban minorities. Unlike the opioid crisis, the crack-cocaine crisis led to the incarceration of millions, most of whom were nonwhite (Alexander 2010; Collins 2019; Provine 2011).¹ Media coverage of cocaine often depicted Black users in an unsympathetic light, linking their drug use to involvement in other crimes (Hartman and Golub 1999; Reeves and Campbell 1994; Reinarman and Levine 1989).

By contrast to the crack epidemic, news coverage now frames opioid abuse largely as a crisis afflicting White Americans (Netherland and Hansen 2016). For example, 94% of opioid users in Pennsylvania news stories were White in 2014 (compared to 44% in 1988) (McLean 2017, 418). While opioid abusers are in fact disproportionately White,² in recent years the mortality rate from drug use has increased more among Blacks than Whites (Collins 2019; Goodnough 2021; James and Jordan 2018; Kaiser Family Foundation 2021; Peñaloza 2021). Whether or not the media is accurate, its messages tend to paint opioid abuse as a problem for Whites.

¹ A central tenet of this punitive policy regime was a mandatory minimum sentence for possession of small amounts of crack-cocaine (Provine 2011).

² For example, in 2019, 72% of Americans who died of opioid overdoses were non-Hispanic White, versus 64% of the adult population (Kaiser Family Foundation 2021).
Furthermore, when the media frames drug abuse with a White ‘face’, it also tends to use a positive valence.\(^3\) By contrast, the Black ‘face’ often carries negative overtones.\(^4\) Coverage of White prescription opioid abuse describes it with such phrases as “a tragic waste of human potential,” while heroin abuse is more often portrayed as criminalized behavior characteristic of “urban minorities” (Netherland and Hansen 2016, 670). In Pennsylvania, as news coverage changed its depictions of opioid users from mostly nonwhite to White, its themes changed from derogatory to “sympathetic” (McLean 2017, 417). Similarly, LDA topic models comparing national news articles about crack-cocaine (1988-1989) and opioids (2016-2017) found the most common topics were “law and order” and “community and home,” respectively (Shachar et al. 2020, 229). Thus, drugs associated with racial minorities are framed with negatively-valenced topics such as crime, while drugs associated with Whites are characterized with positively-valenced topics such as community and family.

These racialized and valenced frames may shape policy. For one, the negative frames of African American crack users may have strengthened support for a “war” on drugs. For example, racially biased White respondents were more likely to support harsh punishment for crack-cocaine when told most crack-cocaine users are Black and most powder-cocaine users are White, relative to a control (Bobo and Johnson 2004, 169).

The other side of the coin holds as well. The positive valence and White ‘face’ of opioid coverage goes hand in hand with low support for punishing opioid users. Most Americans believe “opioid use is an illness,” not a “personal weakness” (Blendon and Benson 2018, 408).

\(^3\) Not all White-focused coverage of drugs is sympathetic (e.g., Cobbina 2008).

\(^4\) Some recent Black-focused coverage of opioids is sympathetic (e.g., Law 2021; Peñaloza 2021)
Two-thirds believe opioid users should be “placed in a treatment program without jail time”; only one-quarter think they should “serve jail time” or favor “stricter punishment and enforcement” (Blendon and Benson 2018). Support for treatment crosses party, region, and personal knowledge of opioid users (Cook and Brownstein 2017; Cook and Worcman 2019; De Benedictis-Kessler and Hankinson 2019). Furthermore, randomized studies of the valence of opioid use find it affects stigma (McGinty et al. 2015; Goodyear, Koffler, and Chavanne 2018). In turn, stigma is correlated with punitive policy support (Kennedy-Hendricks et al. 2017).

The literature on each drug crisis suggests an association between race, valence, and policy, but leaves the nature of that association unclear. The literature has not fully varied both race and valence and has not cleanly separated them. It has not examined whether race affects policy support independently of valence, or if valence matters regardless of race (e.g., Gollust and Miller 2020; Wood and Elliot 2019).

**The impact of valence and racial frames in other domains**

Studies separating race from both positive and negative valence are scarce not only in the literature on drug use, but also in studies regarding other social issues. Some studies vary valence but not race. For example, Baumgartner et al. (2008) trace the impact of positively-valenced innocence frames on declining support for the death penalty, but do not examine the race of the accused. Other studies vary race but not valence (Gross 2008; Valentino 1999). For example, negative coverage of African American versus White defendants increases Whites’

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5 Hurwitz and Peffley (1997) varied valence and race when asking about furloughing “model” versus “violent” prisoners, but omitted a control condition, making causal inference about valence effects challenging. They found null racial ‘face’ effects.
support for punitive policies, but these frames are rarely systematically compared to positive coverage (Gilliam and Iyengar 2000; Iyengar 1991; Peffley and Hurwitz 2007; Valentino 1999). Existing studies do not examine both positive and negative valence by race.

This limitation follows from the relative neglect of sympathy as a framing device. Some studies test “episodic” frames, which offer dispositional explanations for problems, against contextual “thematic” frames, which offer situational explanations, without varying valence (Gross 2008). Yet episodic and thematic frames are not the same as valence and can obscure valence effects. In Iyengar’s pioneering study, thematic and episodic frames had indistinguishable effects in stories of Black crime or drug use (1991, 44). This may be because both the thematic and episodic stories of Blacks were framed unsympathetically.

Taken together, the literature on frames and race across issue domains typically does not vary the Black and White ‘face’ of a stigmatized population while also varying both positive and negative valence, partly because it has not focused on valence as a variable. Thus, little is known about sympathetic framing.

**Are sympathetic frame effects racially selective?**

The answer may be yes. White Americans may be biased against assistance for stigmatized minority populations even when they are portrayed sympathetically. A somewhat sympathetic story about a woman who helped a drug dealer reduces support for mandatory minimum sentences when featuring a White woman but not a Black woman (Gross 2008). In

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6 In Gross’s study, sympathetic episodic framing of a person facing a harsh sentence for aiding a drug dealer elicits sympathy and pity (2008), but the effect of unsympathetic framing of Black and White defendants remains untested.
addition, news stories of hardship elicit more support for government action when portraying White than Black hardship (Iyengar 1991). Even informing Whites that nonwhites are being disproportionately harmed by a policy does not necessarily elicit sympathy (Peffley and Hurwitz 2007; but see Butler et al. 2018). Thus, sympathetic frames of Black drug users may not increase support for treatment over punishment. If they do, the effect may be racially selective, with a weaker political response to Black suffering.

On the other hand, some research finds that Whites do sometimes support policy assistance for racial out-groups. Sympathy in response to Black suffering is more robust than most existing studies recognize (Chudy 2020). Especially in the case of humanitarian crises, like Hurricane Katrina, White Americans sometimes do favor significant assistance to poor minorities (Huddy and Feldman 2006; see also Haynes et al. 2016). Whites may respond to sympathetic frames with strong assistance regardless of race.

In sum, it remains difficult to know whether White sympathy is racially selective, because studies typically do not create clearly sympathetic stories about minoritized populations. Existing studies leave the hypothesis that Whites can respond to sympathetic portrayals of Blacks largely untested.

**Hypotheses**

To address this gap in the literature, we sought to vary valence and race independently and estimate their separate and interactive effects. In addition, we sought to vary valence fully, from unsympathetic to sympathetic, rather than examining only one valence or the other. Finally, we aimed to create strong valence treatments, allowing us to test the impact of a ‘full dose’ of sympathy. To that end, we constructed a hypothetical newspaper story about opioid abuse, varying the race of the users (Black or White) and the valence of the frame (sympathetic or
unsympathetic) (Table 1). Our focus on Black and White racialized groups was guided by the White ‘face’ of the opioid epidemic in contrast to the Black ‘face’ of other drug epidemics. The design is further described below. We compare these conditions to one another and to a no-story control, guided by the following hypotheses.

Valence: We define valence as a set of positive or negative framing elements consisting of external or individual blame, deserving or underserving users, and a focus on the target’s suffering versus their crime. As discussed above, framing studies predict that favorable coverage generates sympathy for story targets, and unfavorable coverage generates antipathy. More specifically, the sympathy hypothesis predicts that favorable coverage increases sympathetic emotions and support for treatment, regardless of target race (C < T1, T3). By the same logic, the antipathy hypothesis predicts that unfavorable coverage increases antipathy and punitiveness, regardless of target race (C > T2, T4). Finally, the full valence hypothesis predicts that favorable coverage produces more sympathy than unfavorable coverage, within each racial condition (T1 > T2, and T3 > T4).  

Table 1: Treatments

<table>
<thead>
<tr>
<th>Race: White</th>
<th>Valence frame: Sympathetic</th>
<th>Valence frame: Unsympathetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1: Sympathetic White (SW)</td>
<td>T2: Unsympathetic White (UW)</td>
<td></td>
</tr>
<tr>
<td>Race: Black</td>
<td>T3: Sympathetic Black (SB)</td>
<td>T4: Unsympathetic Black (UB)</td>
</tr>
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Control condition = No story (C)

Racialization: The valence hypotheses ignore the role of race. Yet the racialization literature finds the racial ‘face’ of the coverage matters. Racial bias is the result of long-term, 

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7 The no-story condition may be an inadequate baseline because prior coverage has already constructed users favorably. Comparing favorable and unfavorable treatments avoids this problem. Later, we examine effects among low-exposure respondents.
cumulative exposure to messages, which may outweigh the effect of one positive story (Gilens 1999; Kinder and Sanders 1996; Mendelberg 2001; Winter 2006). Thus, Anti-Black bias predicts Black users receive little sympathy from the sympathetic story (T3 = C). By the same token, Pro-White bias predicts White users elicit little antipathy from an unfavorable story (T2 = C). Furthermore, racially selective sympathy predicts that favorable coverage generates more positive responses when featuring White than Black users (T1 > T3), and racial antipathy predicts the reverse for unfavorable coverage (T2 > T4). In addition, the racial main effect hypothesis predicts that the combined White conditions will generate more positive outcomes than the combined Black conditions (T1 + T2 > T3 + T4).

Finally, theories of racial bias predict that racial effects will vary by racial predispositions, such as resentment, stereotypes, or White identity (racial moderator hypothesis).8 This expectation builds on a large literature showing that race in a media story activates Whites’ racial attitudes and increases their support for punitive responses and candidates who advocate for these policies. Racial cues typically affect White opinion by activating their racial predispositions (Tesler and Sears 2010; Valentino, Hutchings and White 2002). For example, a vignette activates racial stereotypes and reduces support for welfare when it portrays a Black mother on welfare but not an identical White mother (Gilens 1999; see also Mendelberg 2001; Valentino 1999). It stands to reason that racial attitudes will moderate the effects of the racial ‘face’ of drugs. By this logic, respondents with high levels of White identity or negative racial predispositions will react more negatively to the Black-target conditions and more positively to the White-target conditions. As a

8 White identity is a measure of in-group favoritism with independent effects (Jardina 2019).
placebo test, we test the *ideological null hypothesis*, that the effects of the racial conditions will not be moderated by political ideology or partisanship when accounting for racial predispositions.

**Experimental design**

To test these hypotheses, we conducted two randomized between-subjects survey experiments, on two separate samples. The main sample consists of 1,517 White American adults from the NORC Amerispeak Panel, a national probability-based sample. The other sample is from the survey firm Dynata and is described below. Both experiments were preregistered on OSF and will be analyzed separately. Both use the same basic design from Table 1. After answering standard pre-treatment questions, each participant was randomly assigned to one of four treatments or a no-story control. In the treatments, respondents read a hypothetical news story about drug use, varying the race of users (White or Black) and the valence of the frame (sympathetic or unsympathetic). The story draws on actual news stories and their reader commentaries and, importantly, resembles them in length, narrative style, and the use of vivid photos (Trent and Robertson 2018; Winnefeld 2017). This full-length narrative format generalizes to the type of news content many people consume. It represents an advance over many studies where information is stylized, abbreviated, and lacks imagery, with stimuli too

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9 The NORC sample was fielded in July 2020 and funded by TESS.

10 Sample sizes are based on power calculations. To calculate power for the main study, we assumed an effect size of 0.12, a baseline mean of 0.4, standard deviation of 0.3, alpha of 0.05, and power of 0.80. With five conditions crossed by terciles of racial predispositions, we require 98 respondents per cell, summing to 1,470 respondents.

11 Age, region, education, gender, income, partisanship, and ideology.
pallid to allow the full development of a frame.

The news story begins with statistics about opioid use and a photo of a shadowed figure injecting themselves. Next, it presents the personal account of a fictional drug user named Mike, recounting how he began using opioids and the impact of drug use on his life. We manipulate the valence of the frame using several elements, to create strong, divergent treatments. Following studies cited above, the sympathetic frame includes all the sympathetic elements documented in coverage of White opioid abuse, including the systemic causes of the problem and dramatic renditions of the harm suffered by good, deserving people and their loved ones, caught up in forces outside their control. Our goal is not to test each element, but to create an overall negative or positive valence. This allows us to minimize ambiguity about the sympathetic or unsympathetic nature of the story. It ensures the racial ‘face’ does not carry a valence omitted from the valence treatment. It also mimics actual media coverage, for ecological validity. Our approach aligns with findings that successful stories consist of multiple complementary arguments and dimensions that form a coherent cluster (Abrajano et al. 2018; Baumgartner et al. 2008; Kalla and Broockman 2020). Specifically, the article alters who is to blame for the crisis (“drug companies” vs. “careless patients”), how Mike and other users first obtain opioids (“legal” vs. “ill-obtained”), whether or not Mike had previously been a drug user, how severely Mike’s drug use affected those around him, and whether Mike and other users are responsible for the fallout from it.

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12 This photo was selected because it is personal and vivid but does not indicate the user’s race. It comes from a media story about drug use, further strengthening ecological validity (Orcutt and Turner 1993; Reinarman and Levine 1989).
To vary race, the article alters Mike’s race and the racial group most affected by opioid use, following Sen and Wasow’s framework (2016). Specifically, we use three references: a sentence describing the racial group most affected by opioids, the phrase “rural town” or “inner-city,” and an altered photo and textual description of an otherwise identical White or Black “Mike” (Appendix Figure A1).

We measure four post-treatment outcomes in the main sample. These measure different but related dimensions of responses to drug use: support for government-funded treatment over arrest; willingness to pay taxes for treatment programs; support for a candidate who advocates treatment over arrest; and, as a “subjective manipulation check” and potential mechanism, emotional reactions to users (Banks 2014; Gross 2008; Kane and Barabas 2019). Support for government-funded treatment over punishment is the main outcome of interest. It corresponds to the policy regime switch from harsh punishment when drugs are associated with unsympathetic frames of Black users to treatment policies when sympathetic frames of White users predominate. A willingness to pay additional tax dollars to fund such policies indicates even stronger support for treatment at a personal cost. Finally, an intention to vote for candidates who advocate such policies indicates a willingness to act on behalf of treatment policy. The latter two outcomes represent a hard “test” of sympathetic effects. Both surveys end with additional manipulation checks and racial predispositions measures. The outcome variables, pre-treatment covariates, and moderators are described in detail in Appendix Table A3.

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13 The moderators were unaffected by treatments in the main sample.
Study 1: Manipulation checks

To validate the treatments, we recruited 336 White American respondents through the firm Dynata. We used quotas to obtain a nationally representative sample on standard demographics. We randomized respondents to one of seven conditions: the five conditions described above, and two “no-race” conditions. The outcome variables measure perceptions and emotions, as subjective manipulation checks. Variables are coded 0 to 1, from least to most sympathetic, unless otherwise noted.

We begin with valence effects. First, we asked, “How sympathetic was the portrayal of opioid use in the news article that you just read?” The five-point response ranges from “Very unsympathetic” to “Very sympathetic.” As expected, the sympathetic and unsympathetic conditions yield different ratings: 0.70 (corresponding to “sympathetic”), and 0.51 (“neither sympathetic nor unsympathetic”) (p < 0.001). However, while sympathetic stories are seen as sympathetic, unsympathetic coverage is perceived as neutral. This asymmetry is a substantively informative finding, suggesting the dominance of sympathetic frames.\textsuperscript{14}

In addition, the valence conditions move emotional responses to “drug addicts” in the expected direction (see Appendix Figure A2). Compared to the no-story control, sympathetic stories produce more sympathy and pity. Unsympathetic stories do not affect any of the three sympathetic emotions. By the same token, unsympathetic stories increase two of the three

\textsuperscript{14} In the NORC sample, we asked “how much sympathy do you feel for Mike?”. Valence has a 19 percentage point effect (see Appendix A4 and Table A1).
negative emotions – anger and fear – while sympathetic stories only produce fear. Finally, the valence treatments differ significantly on most of the emotions.\(^\text{15}\)

Also as expected, the racial frame in turn racializes perceptions.\(^\text{16}\) Mike’s race was perceived correctly by nearly every respondent. Furthermore, when Mike’s race is unstated, most (52\%) assume it is White, and only 4\% believe he is Black.\(^\text{17}\) These results are consistent with the long-term effect of the White ‘face’ of opioid abuse on perceptions of opioid users as White.\(^\text{18}\)

To further assess perception of race, we asked, “When you think about opioid addicts, what percentage would you guess are White, Black, or of another race? For comparison, 64\% of the U.S. adult population is White, 12\% is Black, and 24\% is of another racial group.” We coded the open-ended responses into two binary variables: over-estimating Whites and over-estimating Blacks. Most respondents’ perception aligned with their assigned story (see Appendix Figure A4). In the White conditions, 55\% over-estimated the White percentage, compared to 40\% and 17\% in the control and Black conditions. The treatments also affected the Black percentage as expected.\(^\text{19}\) The no-race conditions fall about half-way in between. This far into the opioid epidemic, many

\(^{15}\) The effect of valence on emotions replicates with the main sample, as explained later.

\(^{16}\) Race has no statistically significant main effects on emotions (Appendix Figure A3).

\(^{17}\) The other 44\% were not sure or believed Mike’s race was not mentioned

\(^{18}\) The similarity with White stories informs our decision to omit no-race conditions from the main study. They would not make for a clear nonracial baseline.

\(^{19}\) The racial perception effects replicate in the main study (Appendix Table A2).
believe opioid addicts are White. Yet news stories can greatly affect perceptions of opioid addicts’ race, suggesting the White ‘face’ may be partly constructed in the media.  

**Study 2: Main results**

Next, we turn to the main study. We designed it to test the effects of the treatments on four measures: three political outcomes (treatment policy, candidate, and taxes) and a scale of emotions. All variables are coded from 0 to 1, with higher values indicating sympathy or support for treatment, unless noted otherwise (Appendix Table A3). Across conditions, respondents were generally supportive of treatment over arrest, favored a candidate who supports such policies, and expressed moderately positive emotional responses towards drug addicts, but most were unwilling to pay increased taxes for treatment programs. Appendix Figure A5 displays these raw means, to provide a descriptive look at the data.

We regress each of the four outcomes on treatment indicators and pre-treatment covariates (*age, region, education, gender, income, partisanship, and ideology*).  

We use logistic regression for the binary outcome (treatment policy), and OLS otherwise. Figures 1-3 display the average treatment effects, in percentage points.  

We start with the valence hypotheses, *sympathy* and *antipathy* (Figure 1). Compared to the no-story control, favorable coverage should generate support for opioid addicts, and

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20 The Dynata study also included the same perception question about “drug addicts.” Respondents generalize their racial perception from “opioid” to “drug” addicts only when the story is about Blacks. Results available upon request.

21 Partisanship and ideology are seven-point scales. Results are unchanged with terciles.

22 These are extracted from regressions in Tables A4-A10, using the equations in Appendix A2.
unfavorable coverage should do the opposite, for each target race. As the *sympathy* hypothesis predicts, the sympathetic White condition increases support by statistically and substantively significant amounts, on three of the four outcomes: treatment policies (21 points), a candidate who favors treatment (8 points), and sympathetic emotion (4 points). Likewise, the sympathetic Black condition increases support, for all four outcomes: treatment (13 points), candidate (6 points), taxes (5 points), and emotions (5 points). Overall, the strongest of these effects are on policy and candidates, and the weakest are on taxes and emotion. However, the second valence hypothesis – *antipathy* – is not supported. Specifically, the unsympathetic White and Black conditions each affect only one outcome – emotions – and only mildly (Figure 1). Sympathetic stories are powerful, while negative stories make no difference.

*Figure 1: Comparing each treatment to the no-story control*

![Graphs showing support for treatments and candidate, sympathetic emotional response, and taxes for treatment.](image)

*Estimates are percentage point marginal effects from Logit (for policy) or OLS models, with 95% CIs. Models control on demographics, party, and ideology.*
We test the final full valence hypothesis by comparing the valence conditions to each other, within each racial frame (Figure 2). As predicted, relative to the unsympathetic White condition, the sympathetic White condition generates strong, statistically significant support on three of the four outcomes: policy (18 points), candidate (7 points), and emotion (8 points). In addition, relative to the unsympathetic Black condition, the sympathetic Black condition increases support for policy (8 points) and emotions (8 points). As the full valence hypothesis predicts, favorable coverage produces more sympathetic responses than unfavorable coverage.

Figure 2: Comparing sympathetic to unsympathetic treatments within race (Full valence)

Estimates are percentage point marginal effects from Logit (for policy) or OLS models, with 95% CIs. Models control on demographics, party, and ideology.

Next, we test the racialization hypotheses. As already seen in Figure 1, the Anti-Black hypothesis is not supported. Specifically, the sympathetic story about Black users increases support for all four outcomes. That is, racial bias does not prevent the effect of a sympathetic portrayal of Black users. White respondents do react favorably to sympathetic portrayals of Black users. In addition, as the Pro-White hypothesis predicts, the unsympathetic White
treatment has no significant effects on outcomes (except emotions). However, neither does the Black unsympathetic story (Figure 1). Even negative portrayals of stigmatized Black behavior do not reduce support for treatment, suggesting that anti-Black antipathy has limits.

Figure 3: Comparing White and Black treatments (Racial hypotheses)

Estimates are percentage point marginal effects from Logit (for policy) or OLS models, with 95% CIs. Models control on demographics, party, and ideology.

However, respondents do not respond to portrayals of Blacks and Whites equally. The racially selective sympathy hypothesis receives some support, as seen in Figure 3. Specifically, the sympathetic condition generates less support for treatment policy with Black than White users. The deficit is 8 points, statistically and substantively significant. That said, the other three outcomes show no racially selective sympathy effects. In addition, there is no evidence for the racial antipathy hypothesis: unsympathetic coverage does not generate more antipathy with Black than White addicts (Figure 3). Taken together, these results show racial bias exists but is limited to policy views. In addition, they point to racially selective sympathy rather than racially selective
antipathy. In the contemporary opioid crisis, racial bias is partly caused specifically by a weaker policy response to sympathetic coverage of Blacks than Whites.

Finally, to test the *racial main effect* hypothesis, we compare the pooled Black and White conditions. As Figure 3 shows, this hypothesis is generally not supported. While the Black conditions decrease support for treatment policy by about 5 percentage points, this effect is somewhat uncertain ($p < 0.10$). For the remaining outcomes, the effects are substantively and statistically insignificant. Racial bias manifests clearly only with sympathetic coverage.

We conducted a series of robustness checks. First, we conducted a CACE analysis using racial over-estimating (Appendix A7). The racial main effects are similar with CACE and ATE. Second, we tested whether low prior exposure to opioid news, or high exposure to opioid deaths, moderate the treatment effects, finding it does not do so consistently (Appendix A8).

These results lead to several conclusions. First, sympathetic stories increase support for users, while unfavorable coverage rarely matters. That is, respondents have sympathetic baseline opinions that can be made more – but not less – sympathetic. This is consistent with the cumulative effects of sympathetic coverage. A single unsympathetic story cannot counteract exposure to a high volume of sympathetic coverage, which speaks to the power of sympathy as a framing device. Second, valenced coverage strongly affects policy and candidate support, but rarely changes willingness to increase taxes. Sympathetic coverage has its limits at concrete costs. Finally, the positive effect partly varies by target race. The sympathetic White story produces more support

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23 Personal opioid abuse is not our focus and would be under-reported. Instead, we test whether valence is moderated by state-level opioid mortality rate, and we find it is not. Results available upon request. This analysis was not preregistered.
for treatment policy than its Black counterpart. Sympathetic frames do matter for Blacks, but not as strongly as for Whites.

**Moderating effects of racial predispositions**

The racial ‘face’ of drug users may matter more for those with more negative racial predispositions. To test this *racial moderator hypothesis*, we re-estimate the regressions, including interactions with three racial predispositions in turn: *racial resentment, racial stereotypes, or White identity*. Appendix Tables A11-15 present the results. As detailed below, they show significant interaction effects for racial stereotypes and racial resentment. To further test these effects, we also estimate treatment effects on subsets of resentment and stereotypes (Figure 4 and Appendix Figure A6). Because these figures use subsets, their significance levels may differ slightly from the interaction models.

We find that racial resentment moderates *racially selective sympathy*. First, resentment moderates the impact of sympathetic Black versus sympathetic White coverage, on candidates and taxes (Appendix Table A12). That is, respondents who hold Blacks responsible for their unequal situation are more affected by the racial ‘face’ of sympathetic coverage.

\[ \text{24 Each moderator is used in a separate model. We use terciles for racial resentment and White identity, and a binary split for racial stereotypes. The lowest category is the baseline.} \]

\[ \text{25 But not for White identity, as shown in Tables A11-15.} \]

\[ \text{26 Regression tables for figures are available upon request. All these analyses were preregistered.} \]

\[ \text{27 This racially selective sympathy effect carries over to an overall racial main effect on candidate support, and } p = 0.052 \text{ for taxes (Appendix Table A15). Racial resentment and racial stereotypes do not moderate valence effects or motivated racial effects.} \]
as Figure 4 shows, racial ‘face’ effects are located entirely among high-resentment respondents. Specifically, low-resentment respondents exhibit no racial treatment effects. By contrast, those who blame Blacks’ work ethic and deny their disadvantage exhibit *racially selective sympathy* effects on policy and candidates.28 29

Figure 4: Comparing Black and White treatments (Racial hypotheses, by racial resentment)

Estimates are percentage point marginal effects from separate Logit (for policy) or OLS models on the top and bottom terciles of racial resentment, with 95% CIs. Models control on demographics, party, and ideology.

28 While the interaction effect on policy is not statistically significant (Table A12), the effect is significant for high-resentment respondents and not for low-resentment respondents (Figure 4). For taxes, there is a significant interaction (Table A12) but a non-significant effect in Figure 4.

29 The racially selective sympathy effect largely accounts for the overall racial main effect on resentful respondents, further evidence of the asymmetric role of sympathy (Figure 4).
Racial stereotypes also moderate the racial frame effects, but less consistently. In line with *racially selective sympathy*, treatment policy gets less support with the sympathetic Black than White ‘face’ among the top half of the stereotype distribution (Appendix Table A12). In fact, the Black ‘face’ of sympathetic coverage loses 37 points of support from high-stereotype respondents, and loses no support from low-stereotype respondents (Appendix Figure A6). To be sure, *racial antipathy* is also supported: *unfavorable* coverage also elicits less policy support with a Black than White ‘face’ among those high in racial stereotypes (Appendix Table A14).\(^{30}\) However, this racial antipathy effect is less than half the size of the racially selective sympathy effect (Appendix Figure A6). Finally, stereotypes only moderate the effect on policy, not other outcomes. Overall, then, the stereotypes analyses offer additional – though inconsistent – evidence of racially selective sympathy. What *is* consistent, nevertheless, is the location of racially selective sympathy when it exists: respondents with negative views of Blacks’ work ethic.

In sum, racially selective sympathy is located among those with negative racial predispositions. Only high-resentment respondents offer less support for policy and candidates with sympathetic Black than White ‘faces.’ Only high-stereotype respondents give less policy support with sympathetic Black than White opioid users.\(^{31}\) While these estimates are noisy and

\(^{30}\) These two effects add up to a *racial main effect* from Black vs. White coverage among stereotyping Whites (Appendix Table A15). However, this is driven by sympathetic coverage (Appendix Figure A6). In addition, racial stereotypes do not moderate other effects.

\(^{31}\) Racial predispositions do not moderate treatment effects on emotions, suggesting they affect how Whites translate news stories into political views rather than more general sentiments.
not always consistent across outcomes, they locate racially selective sympathy entirely among those with negative views of Blacks.

**Moderating effects of political ideology and partisanship**

Finally, while these moderator effects support theories of racialization, they do not rule out the alternative explanation: racial coverage may also be moderated by political ideology and partisanship. Specifically, the *ideological null hypothesis* predicts the racial treatment effects are not moderated by political ideology or partisanship after accounting for racial predispositions. To test it, we switch the racial predisposition interactions with ideology or partisanship interactions and include controls for racial predispositions (Appendix Tables A16-20). The results largely support this ideological null hypothesis, with one exception: the Black ‘face’ of sympathetic coverage affects conservatives more than liberals regarding taxes (Appendix Tables A16-17). That is, conservatives are more reluctant than liberals to pay increased taxes for treatment when exposed to sympathetic Black portraits relative to the control and sympathetic White conditions. Otherwise, ideology and party have no consistent moderating effects.

**Conclusion**

Can sympathetic media frames shift policy preferences away from punishment and towards assistance? Does sympathetic coverage affect policy preferences primarily when it focuses on Whites? With few exceptions, across issue domains, studies of media frames have not been able to answer these questions, because they have not disentangled race and valence.

We applied these questions to opioid abuse, a public problem with a staggering toll. According to existing studies, the sympathetic White ‘face’ of news about opioids helps explain the widespread support for treatment over punishment. To our knowledge, however, this hypothesis has not been tested causally. Moreover, we do not know if the White racial ‘face’
matters regardless of valence, or if valence matters regardless of race. We varied the racial ‘face’ and valence of opioid abuse. We used ecologically valid narrative treatments, and two samples, including a large population-based White sample.

First, sympathetic frames increase support for treatment policy and for candidates who favor it. In contrast, unsympathetic frames have no effect. This may be because opioid abuse is already established as a sympathetically valenced problem in the eyes of many White Americans. In any case, it points to the asymmetry of sympathy and antipathy and the neglected importance of sympathetic frames in studies of framing effects.

Second, sympathetic frames increase political support even when featuring Blacks, but matter most when they focus on Whites. Media frames shape public opinion along a gradient of racial hierarchy. Unlike existing studies, which focus on negative constructions of disadvantaged racial groups, we compared negative and positive frames of advantaged and disadvantaged racial groups (Gilens 1999; Mendelberg 2001; Valentino 1999). We find that the racial ‘face’ affects support for generous policy even with a sympathetic frame featuring “deserving” victims. Racial antipathy is not the only explanation for political views; racially selective sympathy is as well.

Third, media has a causal impact on support for health policy. Support for treatment rises with exposure to sympathetic frames. This suggests media framing of opioid abuse helps explain the high support for treatment-oriented policy responses. The findings may generalize to other crises, such as pandemics.

This study investigates the racialized responses of an advantaged racial group (White Americans) to stories of the groups prevalent in news coverage of drug abuse (White and Black racialized groups). Future research should consider how the effects may vary across racial groups.
This research has policy implications. Opioid use is currently framed sympathetically, as a public health issue that affects deserving White “victims” rather than Black “criminals.” This gives policymakers the ability to focus on treatment, as opposed to the punitive approaches that have long dominated American drug policy (Kim, Morgan, and Nyhan 2020). However, if media portrays opioid use as increasing among minoritized populations, support for government-funded treatment may decline – even if the coverage is sympathetic.

Nevertheless, sympathetic coverage of minoritized populations does generate support for assistance. This implies that sympathetic frames, such as videos of Black victims of police brutality, or Latinx children in ICE facilities, may increase the public’s willingness to aid the victims (Haynes, Merolla, and Ramakrishnan 2016). More generally, this research highlights the need to further examine the role of sympathetic framing in the definition of public crises in a range of racialized issues.

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