

# Measuring Dehumanization in Cable News Coverage

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## Abstract

A growing literature in the social sciences explores the role of dehumanization in driving racial attitudes in the U.S. This work in political science and psychology has found strong evidence that a consequential portion of Whites in the U.S. don't believe in the full humanity of stigmatized racial groups, both implicitly and explicitly, and that this disposition impacts political attitudes and behavior (Goff, Eberhardt, Williams, Jackson, & Matthew, 2008; Goff, Jackson, Lewis De Leone, Culotte, & Ditomaso, 2014; Kteily, Brunneau, Cotteril & Waytz, 2015; Jardina & Piston, 2016). But where does this disposition come from? A large literature demonstrates that racial bias can be found in media coverage, and that this bias can be consequential for political attitudes. I argue that the media engages in the systematic dehumanization of key stigmatized groups. Taking advantage of a large dataset featuring hundreds of thousands of cable news transcripts, I use automated text analysis to measure the degree to which stigmatized outgroups are discussed with dehumanizing language.

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## Introduction

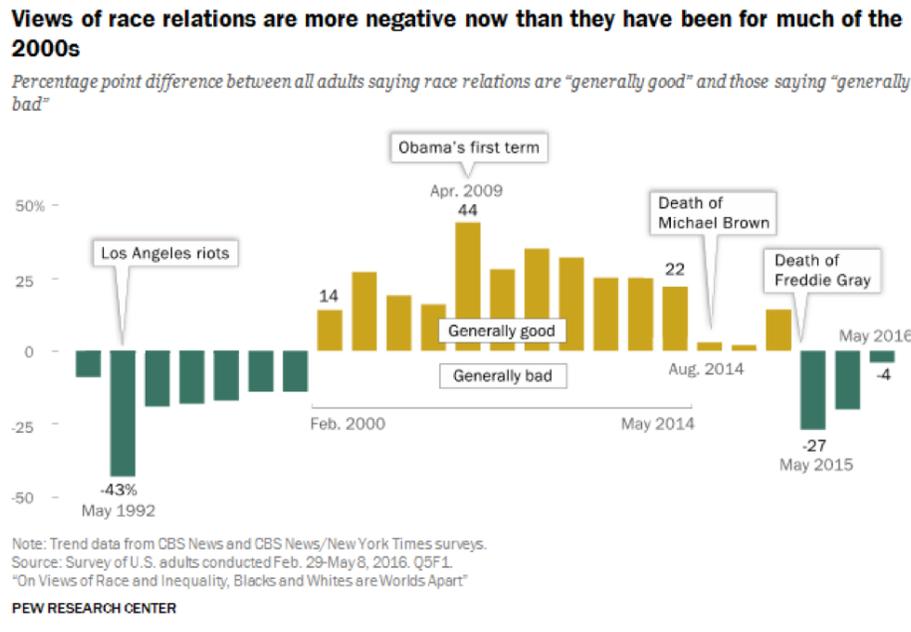
In early 2009, shortly after the inauguration of Barack Obama, optimism about race relations in the United States hit its highest point in years. The election of the nation's first non-White President obviously played a disproportionate role in creating this atmosphere. Obama was the figurehead for what many serious thinkers called a new "post-racial" America: the son of a Black man from Kenya and a White woman from Kansas, an energetic and dynamic public speaker who decried partisan division and campaigned on bringing the country together with hope and change. Despite this optimism, individual attitudes on race did not seem to exhibit the same spirit of harmony. There was no accompanying drop in willingness to express aversive racial attitudes (Hutchings, 2009). However, another trend in racial attitudes that seemed to revolve around Obama sheds light on an even deeper divide in society. In February of 2009, mere weeks after Obama took the oath of office, the New York Post published a cartoon from Sean Delonas which juxtaposed the early struggles of the Obama administration's policy battles and a story from Connecticut where a domesticated chimpanzee attacked a woman. The cartoon depicted the chimp shot dead by cops, with a caption from one of the cops reading, "they'll have to find someone else to write the next stimulus bill." Given the storied historical trope of comparing African Americans to non-human primates to emphasize negative stereotypes about the group, the comic instantly engendered strong criticism.

The New York Post was far from alone in drawing the ire of antiracists by comparing Obama or his wife to a monkey. Mayors in West York, Pennsylvania, and Airway Heights, Washington faced calls for resignation after making controversial Facebook posts comparing President Obama and Michelle, respectively, to apes.<sup>1</sup> GOP politicians from Orange County, California, to Frankfurt, Kentucky to Columbia, South Carolina found themselves in hot water for posting comments on Facebook or forwarding emails comparing President

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<sup>1</sup><http://www.cbsnews.com> , <https://www.huffingtonpost.com>

Figure 1



Obama to an ape<sup>2</sup>. A police chief in Oregon and an officer in Bartow, Florida were all fired for doing the same<sup>3</sup>. There were many other instances of similar conduct during Obama's presidency.

It is impossible to prove that each of these incidents was motivated by strong negative animus or a generalizing judgement about not only President Obama, but African Americans as a whole. However, the fact that so many connected the nation's first African American president to an ape, given historical tropes on this subject, deserves more examination. And indeed, a growing body of work in the social sciences is attempting to theorize and assess dehumanization: the denial of human nature to other humans on the basis of arbitrary factors like gender, sexuality, disabilities, and important for this context, race.

The vast majority of the recent literature on racial attitudes in the U.S. has been predicated on the assumption that biological racism, the belief that Blacks are inherently inferior

<sup>2</sup><http://www.nbcnews.com> , <http://foxlexington.com> , <http://www.wistv.com>

<sup>3</sup><http://www.cnn.com> , <http://wfla.com/>

to Whites, has greatly diminished in the general populace. Though the mere comparison of an African American to an ape is not evidence that someone is engaging in biological racism, burgeoning work from psychology casts serious doubt on the idea that biological racism is rare. When asked explicitly how human different racial groups are, Whites consistently rate Blacks as less human than themselves. This seems to intimate that a sizable portion of the U.S. at less think that Blacks are relatively less "human" than Whites are. It seems likely that this sentiment could be motivating some of the Obama-ape comparisons.

It is important to note that a majority of Americans still reject this explicit dehumanization. But it is unclear if they do so because they fundamentally reject the premise that African Americans are inherently inferior, or because they know that they might face social sanction for endorsing an idea that is taboo. I argue that implicit dehumanization is a powerful motivator here and regardless of explicit preferences it can guide the way we think about African Americans and increase the accessibility of non-human primates in our brain, facilitating comparisons and the use of animal metaphors when describing African Americans. This implicit dehumanization is rooted in a differential categorization of African Americans as relatively closer to non-humans than Whites and can lead to discriminatory behavior in a similar fashion to explicit dehumanization. Simply put, whether explicitly or implicitly, if you deny the humanness of a group you are more likely to deny them the protections that we afford to humans.

But where does this implicit dehumanization, motivated by a differential categorization rooted in learned stereotypes, come from? And how is it maintained in the populace when explicit dehumanization is so taboo? One important possibility is that this connection could be learned from the media. If the research on implicit dehumanization is in fact tapping into a latent and automatic categorization of Blacks as non-human entities, many of those who produce and deliver the news are likely to harbor the same biases that are found among the broader public. This bias should guide the the cognitive associations of the media, and should lead members of the media to be more likely to use animal related

language when discussing African Americans. This should be more common in media with relatively more free-flowing discussion that are less likely to be removed by editors before it hits the airwaves. Cable news shows provide the best test case for this.

## **Literature Review**

### **Race and Media**

Race and racial attitudes are arguably the single most important factor that shapes the way that average Americans approach politics. A litany of research on race and politics has demonstrated that racial attitudes play not only a central role in the formation of political opinions, but a causal one (Valentino & Sears, 2005; Valentino, Hutchings, & White, 2002; Campbell, Converse, Miller & Stokes, 1960). Much of this work has leveraged the important role of the news media in setting the agenda and providing frames for topics to demonstrate this (Mendelberg, 2001; Brader. Valentino & Suhay, 2008; Banks & Bell, 2013). Though much of the early research on the role of media in impacting political found null effects, more recent work, and especially experimental work has shown that media stimuli can lead to swings in both racialized attitudes and behavior (Klapper, 1960; Bartels, 1993; Valentino, Hutchings, & White, 2002).

This specific interplay of media and racial attitudes has been demonstrated most effectively with news about crime. Merely watching a local news report about crime with a Black perpetrator, which is clearly racialized in the U.S., is enough to activate racial resentment and make respondents who harbor negative racial attitudes less favorable toward a politician because of their stance on crime (Valentino, 1999). A large body of literature in the social sciences has established that crime news often over-represents African Americans especially, but underrepresented minorities more broadly as perpetrators of violent crime (Eberhardt, Goff, Purdie & Davies, 2004; Correll, Park, Judd & Wittenbrink, 2002; Payne, 2001). Other work demonstrates that this clear bias in who is depicted as a crim-

inal in the news has likely played a role in the racialization of crime broadly, such that crime news that does not name the race of the perpetrator can still activate racial attitudes (Gilliam & Iyengar, 2000).

A similar pattern has been documented in the way that Americans think about welfare. Gilens demonstrates that there is a clear racial bias in the way that poverty is portrayed in the news and that this shift coincided with the shift in the nature of expressed racial attitudes that came in the wake of the civil rights movement (Gilens, 2009). Gilens goes on to argue that this process went a long way towards racializing poverty broadly among the populace. This led to racial attitudes infiltrating attitudes toward welfare, because racially resentful Whites were likely to associate the policy with benefitting Blacks they saw as undeserving (Gilens, 2009). Subsequent work has confirmed these findings on the racialization of welfare attitudes (Federico, 2005; DeSante, 2013).

## **Implicit Attitudes**

Exposure to racialized news coverage is sufficient to activate racial attitudes, but the racial bias may already be encoded in the structure of the average person's brain. Scholars generally agree that there are two different classes of information processing functions that we regularly engage in (Kahneman, 2003). The first of these classes occurs incredibly quickly, is automatic and uncontrollable, and is often referred to as implicit. The other is secondary, more deliberative, effortful and controllable (Fazio & Towles-Schwen, 2000). Both are incredibly important for understanding how humans respond to real world stimuli, but the prior process is considerably more difficult to measure and understand. But in recent years scholars have developed tools which demonstrate that the racialization of crime in the U.S., which is everpresent in the news media, has seeped deep into the cognitive functions of ordinary citizens.

There is much controversy and disagreement within the literature over what exactly implicit attitudes are, how distinct they truly are from the more deliberative attitudes, and

how much they impact subsequent behavior (Greenwald, Poehlman, Uhlmann & Banaji, 2009; Cameron, Brown-Iannuzzi & Payne, 2012; Oswald, Blanton & Tetlock, 2013). However, despite this disagreement there is substantial reason to believe that these attitudes do exist and can impact certain behaviors especially in the realm of race (Greenwald, Banaji & Nosek, 2015). Researchers have consistently found that in shooter simulations respondents are quicker to shoot Black criminals and more likely to misidentify innocent Blacks as criminals (Payne, 2006; Correll, Park, Judd, Wittenbrink & Sadler, 2008; Greenwald, Oakes & Hoffman, 2002).

Other work has explored the specific interplay between implicit racial attitudes and the news media. Perez (2016) finds considerable evidence that biases in the news media with regard to Latino immigrants can be uncovered in the implicit attitudes of ordinary Americans. He finds these attitudes can have a consequential effect on policy opinions (Perez, 2016). That said, the causality of this relationship is not at all clear. It could just be the case that the bias in the news media is a function of cognitive biases among those who create the news, learned from other socialization processes. Both processes are likely occurring with some feedback, but regardless of which way the causal arrow points, it is worth exploring if trends in racial attitudes that went largely unnoticed in the general public have also been reflected in the news media.

## **Dehumanization**

The empirical social science literature on racial attitudes in the U.S. has wholeheartedly embraced the idea that racism in the U.S. fundamentally changed in the mid 20th century (Kinder & Sanders, 1996; Schuman, Steeh, Bobo & Krysan, 1997). The biological racism that was the underpinning of chattel slavery and Jim Crow, positing that there are inherent and immutable genetic differences between the races and that Blacks were inferior, is all but presumed dead. It was purportedly supplanted by a culturally based racial resentment that places the blame for Blacks subordinate position in society on the supposed cultural

deficiencies of the group (Kinder & Sanders, 1996). However, the literature on dehumanization has challenged this conclusion. Dehumanization is the denial of humanness to other human beings on the basis of arbitrary factors such as race, gender or sexuality. As such, race based dehumanization is clearly a variant of biological racism. Work on explicit dehumanization in the U.S. finds that a large portion of Whites see Blacks as less human on average than Whites and that this holds for a surprising set of subgroups within that population (liberals, women, and the young for instance) (Kteily, Brunneau, Cotteril & Waytz, 2015; Jardina & Piston, 2016).

Though that finding is groundbreaking, other work has looked specifically at the degree to which Americans harbor implicit associations of Blacks with apes. Goff and colleagues use an IAT to compare how quickly respondents pair Blacks names with apes and Whites names with cats, to the converse (Goff, Eberhardt, Williams, Jackson, & Matthew, 2008). These authors find that the speed with which a respondent pairs Black names with apes is related to attitudes about Blacks and criminality, and even leads to increased use of force on Black suspects among police officers (Goff, Eberhardt, Williams, Jackson, & Matthew, 2008; Goff, Jackson, Lewis De Leone, Culotte, & Ditomaso, 2014). I find evidence that this disposition is not only consequential for attitudes relative to Blacks and criminality but impacts support for a broad set of racialized political policies that have implications for the wellbeing of the dehumanized group (Moore, 2017). I also find evidence suggesting that a majority of respondents exhibited this stronger association of Blacks and apes and Whites with humans than the converse, based on an original dehumanization IAT which more accurately focuses on animalistic dehumanization (Moore, 2017).

I theorize that this implicit judgement is rooted in a judgment about the cognitive capacity of Blacks as a whole that leads to a differential categorization of the group as relatively closer to non-humans than their White counterparts (Moore, 2017; Waytz, Gray, Epley & Wegner, 2010). This association seems to be rooted not merely in negative affect as much literature on the origin of racial attitudes might suggest, but in a judgment

about the cognitive capacity of the group aided by stereotypes (Haslam, 2014; Harris & Fiske, 2006; Fiske, Cuddy, Glick, & Xu, 2002). Regardless of whether this categorization is consciously endorsed, or even noticed, by those who harbor it, it should have a similar impact on behavior, especially when respondents do not have the opportunity or motivation to censor it. This disposition predicts a number of racialized policy attitudes even when controlling for both racial resentment and explicit dehumanization (Moore, 2017).

## **Detecting Implicit Dehumanization in Media**

From all of this prior work it is clear that the news media can impact racial attitudes, and that dehumanization, whether implicit or explicit, is a consequential and not uncommon racial attitude. Yet few researchers have explored the degree to which this dehumanization might be detected in the way the news media covers African Americans. In a groundbreaking book Santa Ana examines the metaphors used in contemporary discourse to discuss immigrants and issues around immigration. Santa Ana contends that metaphors are incredibly important tools through which humans make sense of the world around them and while they are by definition not literal, they imply meanings that are all too real and influence subsequent thinking (Santa Ana, 2002). Santa Ana provides considerable evidence that animal metaphors are used to describe immigrants in some cases, but they are not the most common theme (Santa Ana, 2002). A subsequent study built on the work of Santa Ana and examined the specific case of animalistic dehumanization of African Americans. Goff et. Al. examine newspaper descriptions of death row inmates in Philadelphia by race and they code the articles for use of language that might imply dehumanization (Goff, Eberhardt, Williams, Jackson, & Matthew, 2008). They find not only that significantly more dehumanizing language was used for inmates who are African American, but that within African Americans, the inmates sentenced to death received the most dehumanizing language (Goff, Eberhardt, Williams, Jackson, & Matthew, 2008).

These efforts still leave some unanswered questions. Both works focused on relatively

small samples of newspaper coverage, and Goff et. Al. only look at articles about criminals (Santa Ana, 2002; Goff, Eberhardt, Williams, Jackson, & Matthew, 2008). Both studies also struggle to assess a proper counterfactual. Goff et. Al. find that White death row inmates are not subject to the same dehumanizing language but there are far fewer White death row inmates so there is some uncertainty around that estimate (Goff, Eberhardt, Williams, Jackson, & Matthew, 2008). These authors also focus exclusively on print media. There is reason to believe that this type of rhetoric might be more common on other platforms. Newspaper articles are written and rewritten by journalists and then reshaped again by journalists. There is much more time to remove any vestiges of implicit bias in this scenario. Though cable news is often scripted to some degree or planned out, there is much more of an opportunity for extemporaneous and unfiltered speech, especially from guests on the show. To that end it seems likely that cable news will be more prone to revealing implicit bias than newspapers. Cable news does often veer into "soft news" content, that does not contain factual information, but that is an advantage for this study since those discussions are also more likely to be free flowing and vulnerable to implicit bias. I am agnostic to factual content or tone of media for this project, the main concern is whether they engage in dehumanization or not. And though cable news is not viewed by the majority of the populace, there is a body of work showing that it can still impact myriad political outcomes (Clinton & Enomarado, 2014; Arcenau, Johnson, LindstÄddt & Vander Wielen, 2016). I examine a large dataset of cable news transcripts to further shed light on these outstanding questions.

## **Summation & Hypotheses**

Racial attitudes in the U.S. have not completely elided the biological racism that was a hallmark of American's racial attitudes in the first half of the 20th century. A significant number of Americans engage in explicit dehumanization and a majority exhibit an implicit bias that points toward dehumanization. Both of these findings are consequential in that

they strongly influence attitudes towards racialized political policies. Given that the media seems to often reflect racial anxieties found in the broader populace, it seems likely that dehumanization can be detected in media sources.

Efforts to detect this dehumanization in media have been somewhat fruitful, but none broad and systematic. I attempt to change this by examining a wide range of news content over a significant period of time. I also focus specifically on cable news. There is reason to believe given the often extemporaneous nature of live television news, there is a higher chance that unfiltered biases could make their way into discourse. Anchors and especially guests are not as subject to editors who could pick out and reject offensive statements, and generally responses are more likely to be off the cuff and should be more likely to reflect quick and automatic (more or less implicit) thoughts.

From this I propose two specific hypotheses:

1. Discussion of African Americans and issues related to them will be significantly associated with the use of language that is dehumanizing.
2. Use of dehumanizing language will be relatively more likely to be used when discussing Blacks than Whites.

## **Data & Methods**

I first set out to compile a large database of cable television news casts. I use a publicly available database of transcripts of every show featured on CNN's website from 2001-2014, compiled by Gaurav Sood on Harvard's Dataverse (Sood, 2017). Two colleagues and I compiled additional data by batch downloading the complete set of newscast transcripts available on LexisNexis for Fox News and MSNBC. For both of these networks the telecasts range from 1998-2017. From this set of transcripts I filtered out non-news related programming to end up with a database of transcripts from 296 distinct shows, and

280,232 separate transcripts.<sup>4</sup> This provides a fairly exhaustive set of newscasts that is an ideal sample to test the key propositions.

With these data in hand, I employ two separate analytical strategies to explore this data. The first involves examining the word choice in transcripts at the transcript level. For this I preprocessed the text from the transcripts by removing punctuation, stopwords and transforming all of the text to lowercase. From there I compiled the text into a corpus separated by transcript or episode of each news program. To identify dehumanizing language I use a lexicon of dehumanization and an original list of animal names. The prior of these includes words associated with monkeys and or apes by two separate rounds of coders (Goff, Eberhardt, Williams, Jackson, & Matthew, 2008). I then compiled a list of words indicating discussion of Black and White people respectively.<sup>5</sup> These are not ideal in that many of the words used to describe these groups are also used to describe a number of things. Also these groups (especially Whites) might be described in depth without specific reference to race or ethnicity. That said, I verified that these words are strongly associated with the target concepts by manually examining the transcripts where they were featured the most. From there I used the R package *quanteda* to log the raw occurrence of items in each dictionary. I use this to test the relationships between occurrence of dehumanizing language and language indicating race in a given transcripts.

Though that analysis is illuminating, it is far from perfect. To attempt to get more purchase on the use of dehumanizing language to specifically describe certain groups I move to a more micro level of analysis, the sentence. To do this I followed a similar protocol to start and separated the transcripts by episode and preprocessed the text data. I removed stop words and changed case again, but also removed numbers. I then tokenized the text data into over two billion separate sentences using the punctuation in the text, and subsequently removed the punctuation.

To get specifically at the sentence level relationship I borrow a method from computer

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<sup>4</sup>This includes 149,075 transcripts from CNN, 104,573 for Fox News, and 26,584 for MSNBC

<sup>5</sup>Full list of words included in each dictionary can be found in the appendix

science and natural language processing. I use a word2vec model to assess the relationship between words at the sentence level. Word2vec is a neural network-based text analysis method that takes an input layer of text and looks at the relationship between words at the sentence level and creates an n-dimensional matrix of word embeddings, or numerical representations of words, representing the words and their positionality relative to other words (Mikolov, Chen, Corrado & Dean, 2013; Mikolov, Sutskever, Chen, Corrado & Dean, 2013). The model is a shallow neural network, which takes an input layer of words in context, constructs a series of word vectors as a hidden layer and uses this to produce an output layer which can assign probability to words of appearing in proximity or a certain order (Mikolov, Sutskever, Chen, Corrado & Dean, 2013). The outer layer is useful for predicting word patterns but for my purposes the most important layer is the hidden layer of word embeddings. This model is an improvement over the previous method because it can accurately capture the words in context and not rely on the mere occurrence in a much longer document and the method performs comparably to human coders (Spirling & Rodriguez, 2019). The word2vec method is relatively new but has been used to study political phenomena (PreoÅciuc-Pietro, Liu, Hopkins & Ungar, 2017; Minelli & Tonelli, 2017; Garg; Schibienger, Jurafsky & Zou, 2018; Han, Gill, Spirling & Cho, 2019). Though the model is not optimal for classification or prediction, it is quite useful for displaying the relationship between different words (McDonald, 2016).

The word2vec models are created separately for each network. From them I build a dataset of word similarity scores, using the same dictionaries as the initial analysis. I then model the relationship between pairs of words, each pair includes one word from a race dictionary and one word from a dehumanization dictionary. Each model was specified to build a vocabulary of the 10,000 most common words in the full set, so not all words that appear in the dictionary are preserved. However we are still left with 203 pairs.

## Results: Transcript Level

I begin by looking at the relationships between mentions of race and mentions of dehumanizing language. Table 1 presents the results of the first model. The model predicts the occurrence of dehumanizing language in a given transcript, so the outcome variable is the raw count of occurrences of words included in the dehumanization dictionary. Because this is count data that is not evenly dispersed I use a zero-inflated negative binomial model. A Vuong test confirms that the zero inflated model performs better than a standard negative binomial model. I control for the network the broadcast aired on with indicator variables for broadcasts that aired on MSNBC and Fox News (with CNN as the excluded baseline category), the raw counts of words indicating discussion for Whites and Blacks, and the total character count for the transcripts. I also interact the race and network variables to get precise estimates of the impact of race by network.

The first key finding that stands out from Table 1 is that the coefficient for the main effect of language related to Blacks, which because of the interactions, can be understood as the impact of mentions of Blacks in CNN transcripts is negative but does not reach conventional levels of significance. Similarly the main effect for Whites, which can be understood as the impact of mentions of Whites in CNN transcripts, is negative but does reach significance. This gives some indication that dehumanizing language is not likely to occur with mentions of Whites. Turning to the interactions, there is a significant effect in the expected direction for the interaction of Fox News transcripts and mentions of Blacks, such that Fox News transcripts that mention Blacks are significantly more likely to use dehumanizing language than those that don't mention Blacks ( $p < .001$ ). But the next coefficient reveals that the same is true for Fox News transcripts that mention Whites, they are significantly more likely than the Fox News transcripts that don't mention Whites to use dehumanizing language ( $p = .02$ ). For MSNBC neither mentions of Blacks nor Whites are significantly more likely to occur with dehumanizing language than transcripts that do not mention these races.

These results present a mixed picture. The coefficient for the Fox News Black interaction is highly significant, but the rest of the findings with regard to mentions of Blacks do not exhibit the same pattern. And even that finding is troubled by the fact that the same is true for Whites (albeit with less certainty). Fox News, given its clear ideological alignment, is the network most likely to exhibit racial bias, yet this does not present clear evidence of it.

To further examine the degree to which the news media engages in dehumanization of Blacks, I take another look at the data and this time focus on mentions of animals broadly. Table 2 presents a separate model with all of the same independent variables as Table 1 including the key interactions. The dependent variable here is a raw count of mentions of animal names from the dictionary. In compiling the dictionary I took care to avoid animal names that have common homonyms to avoid spurious correlations. For this model, zero inflation is not a problem, since animal mentions were more common than the dehumanizing language. For this set of count data I run a general linear model with a quasi-poisson link function.

The first coefficient, the main effect for mentions of Blacks, can again be understood as the impact of mentions of Blacks only in CNN transcripts. This coefficient is negative and significant, indicating that CNN transcripts that mention Blacks are less likely to use dehumanising language than CNN transcripts that do not ( $p < .001$ ). This is the exact opposite of the hypothesized effect. The surprises do not stop there as the very next coefficient, the effect of mentions of Whites in CNN transcripts, is positive and highly significant ( $p < .001$ ). This again flies in the face of the hypotheses. No such effect can be found in either of the interactions. For Fox News neither interaction reaches significance and the same is true for MSNBC.

These findings present some interesting questions. The patterns do not point to rampant dehumanization in the media. Though there seems to be an increase in dehumanizing language when discussing Blacks on Fox News, the same is true for Whites. Further

Table 1

<i>Dependent variable:</i>	
Dehumanizing Language	
Black	-0.00002 (0.001)
White	-0.009*** (0.001)
FOX	-0.343*** (0.011)
MSNBC	-0.297 (0.189)
Charcount	-0.003 *** 0.0006
Black:FOX	0.007 *** (0.0001)
White:FOX	0.006* (0.003)
Black:MSNBC	-0.014 (0.015)
White:MSNBC	0.001 (0.001)
Constant	-0.331*** (0.005)
Observations	280,387
Log Likelihood	-311,633.900
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table 2

	<i>Dependent variable:</i>
	Animal Language
Black	−0.003*** (0.001)
White	0.014*** (0.0003)
FOX	−18.840 (43.705)
MSNBC	−19.681 (72.204)
charcount	0.00004*** (0.00000)
Black:FOX	−0.015 (11.723)
White:FOX	−0.077 (11.675)
Black:MSNBC	−0.022 (12.073)
White:MSNBC	−0.041 (3.697)
Constant	0.183*** (0.005)
Observations	280,387
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

mentions of Blacks are not associated with increased use of animal related language on any of the networks. That said, this analysis is rough and though making use of a large set of data cannot pick up on granular relationships. To get a more precise sense of the way dehumanization may be operating in media, I turn to the sentence level.

## **Results: Sentence Level**

As a final test of the proposition that the media engages in dehumanization of Blacks I turn to the results of the word2vec models. These models use neural networks to build a matrix representaiton fo words in space and identify words that co-occur. I separately build word2vec models for each of the networks. <sup>6</sup> From there I take the same lists of words indicating dehumanizing or animal language and match them to words indicating discussion of Blacks and Whites respectively. The model only preserves the 10,000 most common words so not all the words were preserved but there were still 203 unique unique pairs. For each of these I record the word similarity score based on the closeness of the two words in the matrix. The higher the value the more likely the words are to appear in close proximity to each other.

Table 3 shows the results of a simple OLS model predicting these word similarity scores. Because of the relatively small number of observations I pool the networks, but run the models separately for dehumanizing language and animal language. The only independent variable is mentions of Blacks. As such the excluded category and direct comparison is mentions of Whites. The coefficeint in the first model in Table 3 is negative but does not reach signifcance. This idicates that mentions of Blacks are no more likely to cooccur with dehumanizing language thna mentions of Whites. the exact same is true for the second model predicting uses of animal language. The coefficient for Blacks is again negative and insignificant indicating that mentions of blakcs are no more likely to occur

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<sup>6</sup>Due to some data issues I was not able to include the Fox News word2vec model, this analysis is limited to just MSNBC and CNN

near animal language than mentions of Whites.

Table 3

	<i>Dependent variable:</i>	
	Distance	
	Dehumanizing Language	Animal Language
Black	-0.016 (0.016)	-0.006 (0.016)
Constant	0.152*** (0.012)	0.176*** (0.012)
Observations	76	127
R <sup>2</sup>	0.013	0.001
Adjusted R <sup>2</sup>	-0.0004	-0.007
Residual Std. Error	0.069 (df = 74)	0.088 (df = 125)
F Statistic	0.969 (df = 1; 74)	0.150 (df = 1; 125)

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

These results seem to follow the lead of the initial analysis and uncover no clear racial bias in the language used by the news media. Though dehumanization can be found in the broader public, the evidence presented here demonstrates that it cannot be easily uncovered in the speech patterns of cable news broadcasters.

## Conclusion

There is considerable evidence that much of the public engages in dehumanization but can this be detected in the mass media? The evidence I present here says no. There seems to be a robust relationship between discussion of African Americans and the use of dehumanizing language in the transcript level analysis for Fox News. That relationship highly significant, but there is also a smaller in magnitude but still significant positive association between discussion of Whites and the use of dehumanizing language. Examinations of animal language demonstrate no evidence of bias. This provides little support for the

original hypotheses. However, there are some clear issues with this analysis. In order to try and estimate with more certainty I move to the micro sentence level. Here the evidence is still indicative of no bias. There seems to be no difference in the cooccurrence of mentions of Blacks and mentions of Whites with either dehumanizing or animal related language.

However there are still some reasons to believe this cut at the analysis might not tell the full story of dehumanization in media. The proxies I used for discussion of different races were clearly suboptimal. I would like to use supervised and unsupervised classification techniques to get a more accurate sense of when different races are being discussed. This would help to put a lot more certainty around the estimates that I create based on race. Finally, I would like to narrow my focus to specific issues. Dehumanization should be most powerful when discussing issues that have to do with the well being of the dehumanized group. Given that, there should be more dehumanization when discussing these types of issues. Though this is often demonstrated with issues of criminal justice, my other work shows this might be perceptible when discussing issues like poverty and healthcare. I would like to further narrow the focus and also tie this more closely to how Americans think about politics. I am also attempting to sharpen my focus specifically on the use of dehumanizing metaphors. There is a large literature on the use of metaphors and the impact they can have on beliefs and behavior within the realm of politics (Bougher, 2012; Kalmoe, 2014; Boeynaems, Burgers, Konjin & Steen, 2017). There is also evidence that the use of animal metaphors can activate dehumanization (Loughnan, Haslam, & Kashima, 2009). Given all of this, a focus on the use of dehumanizing metaphors might be more fruitful, and the word2vec model can be better utilized to assess this.

Dehumanization has been linked quite strongly to genocide in the literature and for that reason it is normatively quite troubling that scholars have been able to uncover considerable evidence of it in contemporary politics. It's almost certain that it was in part responsible for some of our nation's most shameful history, like slavery, Jim Crow, the eradication of indigenous populations, and in more contemporary periods, police brutal-

ity. It is quite important to understand exactly how and why this attitude is common. Though this paper does not have a clear answer for that I have hopefully moved the ball forward on determining exactly where these attitudes come from. Much more work is needed to get a more complete understanding, but scholars should take careful note of this disposition because of the very grave consequences it can precede.

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# Appendix

## Dehuamnizing Langauge

- "animal", "ape", "barbaric", "beast", "bellow", "brute", "claw", "collar", "crawl", "crouch", "flush", "hairy", "howl", "hunt", "husky", "jungle", "monster", "net", "pack", "pounce", "predator", "prey", "prowl", "savag", "scamper", "scratch", "slaughter", "spring", "stalk", "stampede", "swarm", "tail", "tame", " trap", "wild"

## Animal Langauge

- "dog", "cat", "snake", "wolf", "crow", "mouse", "bull", "jackal", "bat", "mosquito", "shark", "hawk", "dove", "horse", "lion", "tiger", "bee", "elephant", "seal", "salmon", "squirrel", "bear", "leopard", "jaguar", "rhino", "spider", "roach", "monkey", "ape", "gorilla", "turtle", "whale", "dolphin", "deer", "antelope", "gazelle", "giraffe", "hippo", "kangaroo", "pig", "penguin", "raccoon", "goose"

## Distributions

Figure 2

Figure 1: Dehumanization Counts

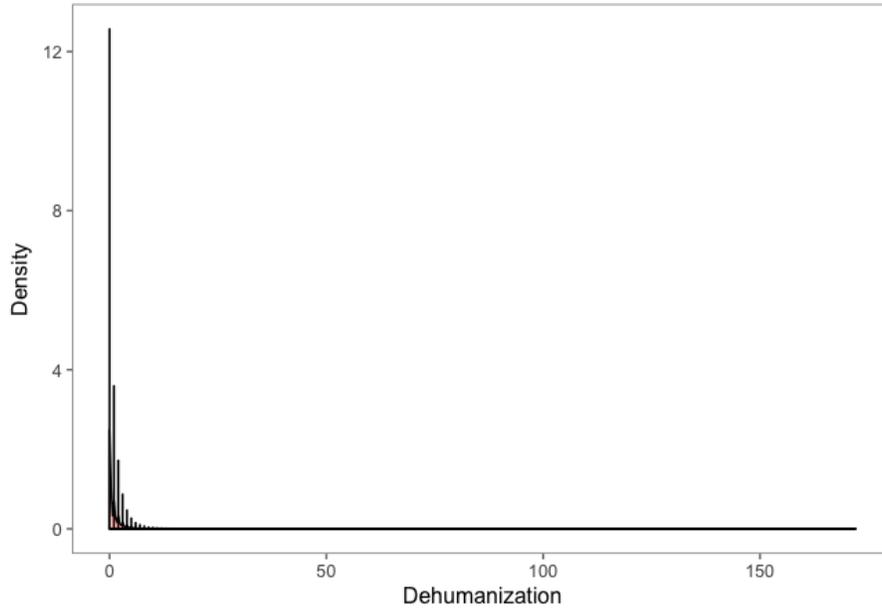


Figure 3

Figure 2: Animal Counts

