Investigating Racial Disparities in Law Enforcement Twitter Feeds

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Abstract

Today's social media landscape is ever evolving and changing as the world continues to advance technologically. The expansion and popularization of social media has caused many organizations, including police departments and sheriff offices, to expand the reach of their operations into the online world. Police departments and sheriff offices primarily use social media to post about missing persons, ask for suspect identification, give information on arrests, and generally boost publicity. But, in a world plagued by systemic racism with calls for police reform, to what extent do racial disparities exist in the posts North Carolina police departments and sheriff offices make on their Twitter feeds? The purpose of this project is to primarily investigate whether there are disparities in the association of Black people with crime that could be derived from who is featured on law enforcement Twitter accounts. This study investigates eight diverse police department and sheriff offices across the state of North Carolina to measure the racial demographics of who is featured on their Twitter feeds. Overwhelmingly Black people were disproportionally represented among the people who were represented in the Twitter feeds studied.

Introduction

This research comes at a time in which America is asking new and heightened questions of its law enforcement. The murder of George Floyd in 2020 sparked protests across the nation with calls for police reform. Still, over a year after his death there has been a dearth of broad stroke police reform across the country. The world is also in an age of questioning the extent to which social media and the consumption of certain news types can contribute to implicit bias. There has been a lack of comprehensive research on the intersection of policing and social media, a fissure this research intends to address.

Some research has been done on the impact of newspaper mugshots on finding employment. Once mugshots are published online, they are available indefinitely (Rink 2021). Crime stories, especially those posted with mugshots, have high click rates and thus local newspapers often profit from posting mugshots (Rink 2021). But the impact of these mugshots — that are often racially skewed — can be devastating towards future job prospects for those featured.

Past studies have noted problems of racial disparities among the photos that newspapers are posting. For example, a 2018 report by Alayna Colburn and Lisa Melander highlights a case study in which the same newspaper portrayed a group of white male suspects and a group of Black male suspects. The white male suspects were featured with professional yearbook photos, and the Black male suspects were featured with their mugshots (Colburn and Melander 2018). Colburn and Melander's study of five popular national newspapers found that white mugshots were 48% of the data and African American mugshots were 23% of the data. The racial disparities of the mugshots posted by law enforcement Twitter feeds in this study show much more startling numbers and heightened disparities.

Some newspaper companies have started to address problems that arise with posting mugshots in news stories. For example, Gannett in 2020 after the murder of George Floyd announced that some of its newspapers would stop publishing arrest mugshots on its websites (Tiffini 2020). Still, many newspapers today continue to publish images of mugshots. While racial disparities in newspaper mugshots are somewhat relevant to this study, not much research has been done on racial disparities in the mugshots posted directly from police and sheriff social media accounts. When mugshots are posted directly from the Twitter accounts of these law enforcement offices, they bear more credibility and are more official than a third-party

newspaper. Additionally, the audience of police department and sheriff offices' social media feeds is likely quite different from the audience of some of these newspapers. There has been some research on the audience of police social media feeds; however, more up-to-date and detailed studies need to be done.

A 2012 study by Jeremy Crump explores the rise of police-force social media accounts in the United Kingdom. It found that the majority of followers of the 27 accounts it studied were businesses or individuals (Crump 2012). Law enforcement offices started to explore options for integrating social media into their systems in the early 2010s. Most of the U.S. law enforcement accounts used in this current study were opened between 2009-2011. There are many different factors that have led to the rise in police use of social media accounts. Crump's 2012 study looks into the origins of policing in the UK. While the UK's policing is rather different from the United States', there are parallels in the reasons police departments from both countries have chosen to open social media accounts. Crump found that police forces largely use Twitter as a communication strategy to enhance the reputation and accessibility of the police department to its community (2012). Pressure to conform to the emerging information age and improve public engagement led many departments to open accounts in the years shortly after 2008 (Crump 2012). Of the 27 UK accounts in Crump's study, the accounts were used primarily to provide public safety information (2012). A similar 2011 study by Thomas Heverin and Lisl Zach investigates Twitter use by city police departments in large U.S. cities with populations greater than 300,000. Heverin and Zach's study found that in 2011 of the 30 accounts analyzed, almost half of the tweets contained crime or incident information about shootings, stabbings, accidents, arrests, robberies, and murders. Furthermore, 14% of the posts were promotional department information, 10% were event tweets, and 5.6% were asking for person identification (Heverin

and Zach 2011). While both of these studies provide insight into how police departments initially employed social media, they are both rather outdated. Since both of the studies were published, social media has evolved, police departments have changed, and several waves of Black Lives Matter movements have struck the nation with calls for police reform. There needs to be more relevant and up-to-date study of how police departments are employing social media — something this current study seeks to address.

In addition to research on newspaper mugshots and police social media feeds, there is another aspect of this study that has previously been examined — the development of implicit biases from racialization of police Twitter feeds. If there are racial disparities in the people depicted on law enforcement Twitter feeds — which this study concludes that there are — what is the impact of that on passive users of Twitter? One 2020 study looks into a similar issue and investigates Twitter users' responses to race and racism on Twitter feeds. Shaniece Criss et al. found that social media sites like Twitter are a new setting for racism and related stressors to emerge (Criss et al. 2020). It found that people tend to follow accounts that agree with their views, thus furthering racial biases (Criss et al. 2020). Are people who are generally supportive of the police more likely to follow these law enforcement Twitter accounts? In doing so, when they see collections of images that aren't reflective of true population demographics what bias does that inflict?

There are several different angles of note when exploring racial disparities in the images posted by police social media feeds. In order to address the dynamic, multifaceted impacts of those racial disparities, though, it's important to first understand the extent to which these racial disparities exist. This research investigates eight police and sheriff Twitter accounts in North Carolina to determine whether racial bias exists among the photos that are posted. To do this, it

looks into past tweets from each account and analyzes each image posted by the account for various variables including race, gender, and general characteristics of the image. This research finds that overwhelmingly Black men are overrepresented in the images posted by these law enforcement Twitter accounts.

Methods

In order to analyze potential racial disparities in law enforcement social media feeds, tweets from eight different police and sheriff office accounts in the state of North Carolina were examined. The research was limited to the state of North Carolina in order to have a reasonable scope of study for the scale of this project, but further studies should encompass a broader region.

Several factors went into the selection of the final eight Twitter accounts that for this current study. Allegheny (@alleghenybadge), Asheville (@AshevillePolice), Charlotte-Mecklenburg (@CMPD), Fayetteville (@FayettevillePD), Henderson (@SheriffHCSO), Huntersville (@HPDNC), Raleigh (@raleighpolice), and Wilmington (@WilmingtonPD) were selected as the final accounts-of-study. Initially Google searches were employed to see which Twitter accounts would appear with the keywords "N.C. Police Department Twitter Accounts." From the search results, a preliminary list of accounts was developed. A list of all the counties in North Carolina was then employed to check the popularity of other law enforcement Twitter accounts in the state. Population size of the municipality was also considered as a factor. A variety of municipality sizes were assessed ranging from 58,000 people in Huntersville to 930,613 people in the Charlotte-Mecklenburg Police Department coverage zone (*City of Charlotte*). U.S. Census Bureau Data was used to compile information on population size for all the municipalities, excluding Charlotte-Mecklenburg due to the nature of CMPD's coverage.

Only accounts with greater than 1,500 tweets were included in the survey to ensure there would be enough data to analyze. Henderson County is an outlier in the dataset as it has the least number of total tweets and the smallest follower county when compared to the other departments studied (*see Figure 1*). The list of departments studied is not a comprehensive list of all North Carolina law enforcement Twitter accounts with greater than 1,500 tweets. See Figure 1 for information on each account's date of creation, number of tweets, and follower count as of Dec. 7, 2021.

Fig. 1: General Account Information as of Dec. 7, 2021

Account	Date Created	Number of Tweets	Follower Count	Pop. Size 2019
Allegheny	Aug. 2009	1,755	4,754	11,137
Asheville	May 2011	4,145	9,025	92,870
Charlotte	Aug. 2011	12.3K	65.9K	930,613
Fayetteville	Sept. 2010	9,674	11.1K	211,657
Henderson	July 2015	1,679	879	117,417
Huntersville	March 2010	6,761	8,027	58,098
Raleigh	Oct. 2010	3,976	18.7K	474,069
Wilmington	June 2009	4,943	17.8K	123,744

Once the accounts were selected, a Twitter API developer account was used to scrape past tweets from the accounts. Using the R programming language, the 3,200 most recent tweets were scraped from each of the law enforcement Twitter feeds. All of the tweets were scraped from accounts with fewer than 3,200 tweets. The scraping occurred between October and November, 2021. Using R, each scraped image or video thumbnail was downloaded onto a personal computer. Regex was used to specify the image names. The files each had a unique slug to allow them to be easily searchable.

Images were examined one-by-one and coded for several factors (*see attached coding manual*). Not every image was of a person. For the purpose of this research only images with people were of concern. This was accounted for in the "human" code. Human_count was the number of people pictured in the image. If the same person was pictured multiple times, the count would be one. If multiple people are depicted in the same post, a new line was created in the coding spreadsheet to code for the traits of each new person. The researcher noted "ADDED" in the comments section for any added images.

"Type" accounts for what type of image is depicted. 1 is a mugshot, 2 is a surveillance image, and 3 is a missing persons alert. Some missing persons alerts look similar to mugshots. If there was uncertainty, the researcher consulted the text of the tweet to determine if the image was correlated with a missing persons alert.

"Race" and "Gender" were the two main variables of interest. Race was divided into white (not Hispanic or Latinx), Black, Hispanic/Latinx, Asian or Pacific Islander, Native American, and unidentifiable. For the purpose of this project, only the binary male and female genders were used. It is difficult to account for nonbinary genders upon visual cues alone when pronouns are not published with the images.

An "unidentifiable" image, for either race or gender, is one in which visually it is impossible to see the race or gender of the person pictured. The image may be dark or blurry or otherwise obstruct the view of the person depicted. Confidence codes were also employed as race and gender are both visual characteristics that cannot be coded with 100% certainty. The confidence codes account for how confident the researcher is that the code they assigned to race or gender is correct. A researcher may code race as "6" with a confidence code of "2" which would indicate the researcher is 100% confident that the race is unidentifiable.

Because of the nature of this research a research assistant was hired to code the images in order to increase the reliability of the study. Race and gender are visual characteristics that are somewhat subjective. In order to ensure that the two examining researchers had strong reliability, a reliability calculator developed by Deen Freelon was utilized to calculate the reliability of the coders/researchers (dfreelon.com/recal). A minimum Krippendorff's Alpha of .7 was required in order to ensure reliability was established.

Results

There are significant racial disparities in the demographics of people posted on law enforcement Twitter feeds. Black people were particularly overrepresented in the images that were posted by the North Carolina law enforcement accounts studied. Of the eight accounts studies, for six of the accounts Black people comprised the majority of the people who were posted. CMPD had the highest percentage of Black people posted with 78.5% compared to 12.7% images of white people. Only 35.2% of the population in Charlotte is Black, according to U.S. Census Bureau data. For Fayetteville Police, 68.8% of the images with people were of Black people and for Raleigh Police, 67% of the images were of Black people. The Black populations of Fayetteville and Raleigh are 42.1% and 29% respectively. Compared to its population demographics that are a majority-white, @alleghenybadge significantly posted more photos of Black people. For Allegheny, 62.5% of the images were of Black people, but African Americans only account for 1.8% of the county's population. The other accounts in which the people featured were a majority Black include Huntersville at 51.7% and Wilmington at 51.5%.

Two law enforcement accounts did not feature a majority of Black people in the images that were posted. Henderson was an outlier with white people comprising 77.4% of the images and Black people comprising 14.3%. Of all the municipalities studied Henderson County also

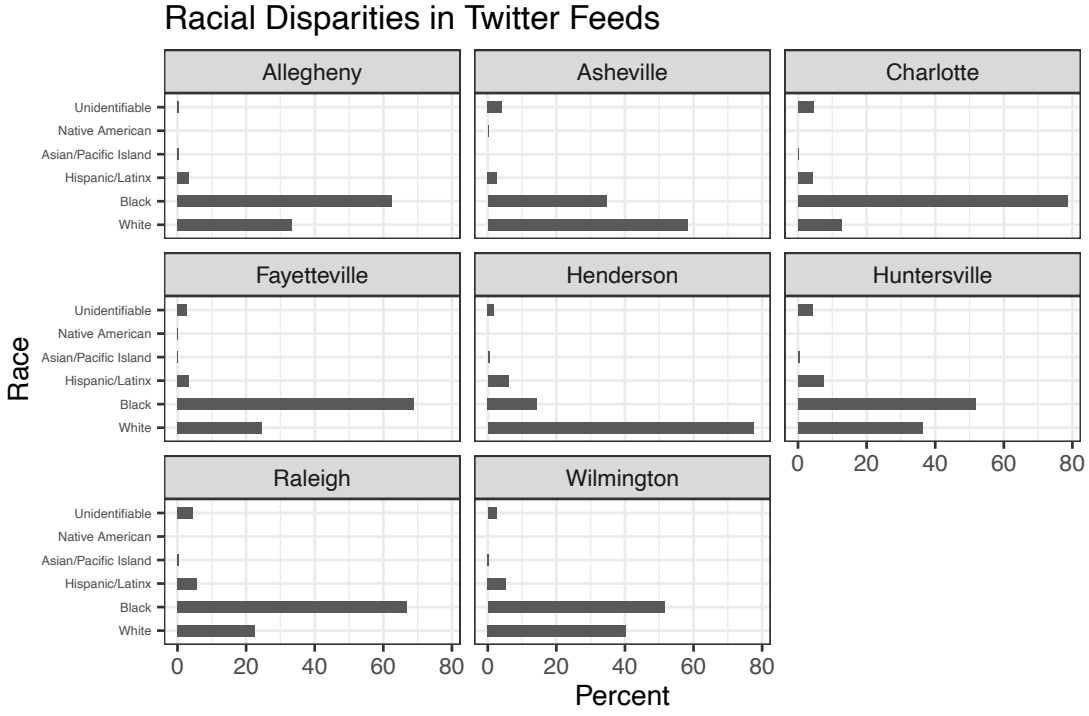
has one of the smallest Black populations at 3.4% according to U.S. Census Bureau data. Henderson also has the smallest follower count of the accounts selected for this study and the fewest number of overall tweets. It was also created the latest as the account wasn't founded until July 2015. Asheville was the other account in which white people were the dominant race featured in the images posted. About 58.3% of the people were white compared to 34.6% Black. Asheville had the second-highest white population of the municipalities studied at 77.9% according to U.S. Census Bureau data. The only municipality that's greater is Allegheny with 86.7% of the population being white. Population information from the U.S. Census Bureau is based on the "White alone, not Hispanic or Latino" category. See Figure 2 and Figure 3 below for a summary of the racial disparities in the Twitter feeds. Figure 2 is a table and includes municipality population demographic data collected by the U.S. Census Bureau. The demographic percentages for these two figures are an average of the results from both coders.

In addition to the race variables listed in the table, both researchers also coded for Asian/Pacific Islander, Native American, and unidentifiable. These numbers were not significant enough to include in Figure 2 but are included in the graphs for Figure 3. Unidentifiable, again, is an image in which the photo is too dark or blurry or otherwise obscured to see the person's race. Between both coders only 10 images featured Asian/Pacific Islander, 3 featured Native Americans, and 111 were unidentifiable.

Fig. 2: Percent of Each Race Featured on the Law Enforcement Twitter Feeds Compared to General Population Demographics of the Municipality

Account	White	Pop. White	Black	Pop. Black	Hispanic	Pop. Hispanic	Other/ Unidentifiable
Allegheny	33.5%	86.7%	62.5%	1.8%	3.2%	9.9%	.8%
Asheville	58.3%	77.9%	34.6%	11.2%	2.7%	6.8%	4.4%
Charlotte	12.7%	41.5%	78.5%	35.2%	4.2%	14.3%	4.6%
Fayetteville	24.5%	37.5%	68.8%	42.1%	3.5%	12.4%	3.2%
Henderson	77.4%	83.1%	14.3%	3.4%	6.0%	10.3%	2.3%
Huntersville	36.4%	75.3%	51.7%	12.5%	7.4%	6.7%	4.5%
Raleigh	22.6%	53.1%	67%	29%	5.6%	11.2%	4.8%
Wilmington	40.3%	71.7%	51.5%	18.4%	5.3%	6.3%	2.9%

Fig. 3: Combined Race Results from the Two Coders



The study did not find significant proportions of Hispanic/Latinx people featured in the images. The distinction between white people and Hispanic/Latinx people, though, was one of the points of greatest initial disagreement among the two coders. Most of the codes in which race_confidence was 1 (on a scale of 0-2) were when it was indistinguishable if a person was white or Hispanic/Latinx. Whenever race was unidentifiable, the coder was instructed to reference the text of the tweet to see if the race of the person featured was identified. If it was not, the coder would put a confidence code of 1 if they were unidentifiable. Researcher 1 had a confidence code of 1 on 209 images, and Researcher 2 had a confidence code of 1 on 161 images. No significant changes occurred in the data when codes with a confidence code of 1 were excluded from the report, so they were included in the final percentage calculations. When the confidence codes of 1 were excluded, the main changes occurred in the white and Hispanic/Latinx categories. The main category of interest, Black, was not significantly affected by keeping or removing lower confidence codes. Figures 4 and 5 show the independent results of each researcher.

Prior to analysis codes from both researchers were analyzed for reliability using a recal calculator developed by Deen Freelon. In order to ensure reliability between the two coders, a minimum Krippendorff's Alpha of .7 was met.

Fig. 4: Researcher 1 Racial Disparity Results

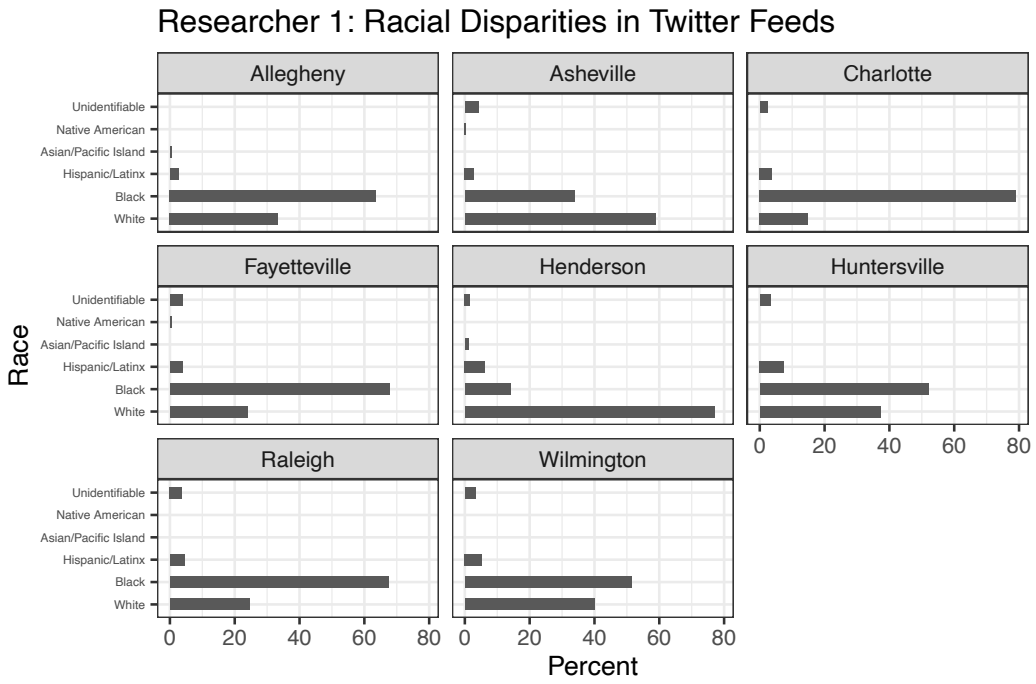
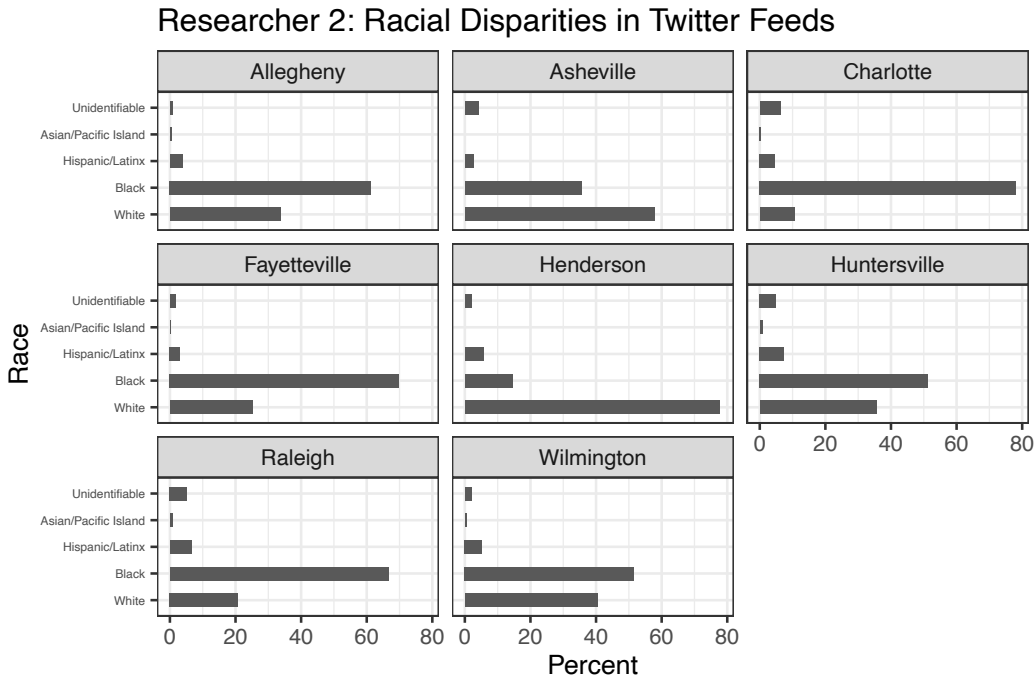


Fig. 5: Researcher 2 Racial Disparity Results



Another aspect of the research that was important to consider is the context under which the images are being posted. Not every police department or sheriff office on Twitter is posting solely images of mugshots. In fact, in the accounts studied, the departements used Twitter to post a broad range of information including promotional pictures, traffic, features on specific officers, etc. Images that were of police officers or promotion images were not included as data points in this study.

Three main categories of images were coded: mugshots, surveillance images, and missing persons alerts. For some of the missing persons alerts the text "missing," "located," or "runaway" was printed over the images indicating to viewers that the image is of a missing person. For some of the images, only the text of the tweet gave clues as to whether the person featured was a missing persons. Some departments used a blue background on their mugshots if the person depicted was a missing persons, but others used blue backgrounds for general mugshots. Across the different accounts, there was no consistent styling of tweets, and even within each account, some departments changed their tweet formatting over time.

The purpose of this project is to primarily investigate whether there are disparities in the association of Black people with crime that could be derived from who is featured on law enforcement Twitter accounts. Missing persons alerts are interpreted by Twitter users differently than a general mugshot. While it is still significant if the majority of missing persons alerts posted by these departments are of Black people, for the purpose of this analysis a second set of data was compiled that excluded missing persons alerts (see Figure 6 and Figure 7). In Figures 6 and 7, any image coded type 3 (missing persons) and any tweet text that included the words "missing," "silver," or "runaway" were excluded from the study. "Silver alert" was a common phrase employed by the accounts to indicate a person with dementia, generally someone elderly,

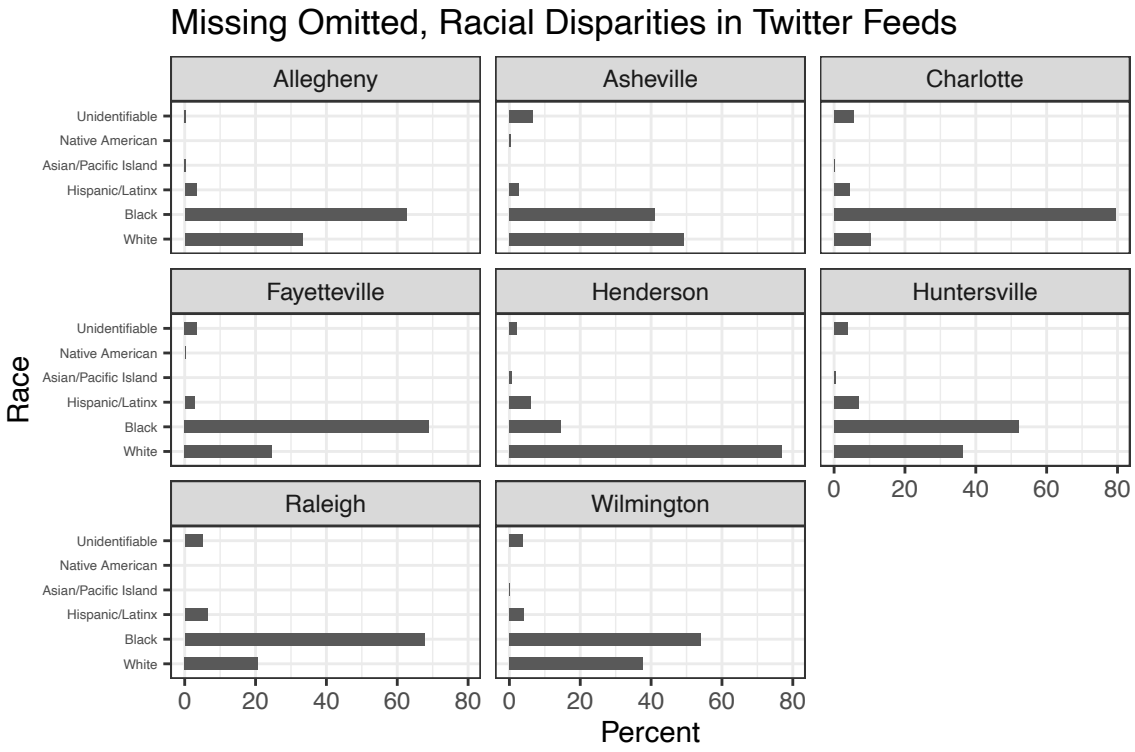
who has gone missing. This cut 788 tweets from the 3795 tweets that were analyzed by the two researchers from the combined data set. Both researchers coded type 3 for 349 of the tweets. The other 90 tweets that were eliminated from the set contained either the words “missing,” “silver,” or “runaway” in the tweet text and were removed from the dataset as well. Figure 6 (below) depicts the percentages of the races featured with missing persons tweets included in the dark shaded columns and with missing persons tweets excluded in the light shaded columns.

Overall, there does not appear to be significant changes in the race data when missing person images are excluded from the study. Asheville appears to be the most affected by the elimination of missing persons images. The percentage of Black people featured rose from 34.6% to 41.2% when missing persons alerts were excluded. Likewise, in Asheville the percentage of white people featured dropped from 58.3% to 49.3%. This would indicate that the majority of the people featured in the missing persons alerts in Asheville were white. In Wilmington, the percentage of white people featured dropped from 40.3% to 37.7%, and the percentage of Black people featured rose from 51.5% to 54.2%. Similarly, in Charlotte, the percentage of white people featured dropped from 12.7% to 10.3%, and the percentage of Black people featured rose from 78.5% to 79.6%. In Raleigh, the percentage of white people featured dropped from 22.6% to 20.7%. The percentage of Black people featured in Raleigh stayed nearly the same, only increasing by .7%. The percentage of Hispanic/Latinx people featured rose slightly from 5.6% to 6.5%. These changes are summarized in Figure 6.

Fig. 6: Combined Race Results, Missing Persons Tweets Excluded in White Columns (M. = missing)

Account	White	M. White	Black	M. Black	Hispanic	M. Hispanic	Other/ Unidentifiable	M. Other/ Unidentifiable
Allegheny	33.5%	33.3%	62.5%	62.6%	3.2%	3.3%	.8%	.8%
Asheville	58.3%	49.3%	34.6%	41.2%	2.7%	2.6%	4.4%	6.9%
Charlotte	12.7%	10.3%	78.5%	79.6%	4.2%	4.2%	4.6%	5.9%
Fayetteville	24.5%	24.6%	68.8%	69%	3.5%	2.7%	3.2%	3.7%
Henderson	77.4%	76.9%	14.3%	14.4%	6.0%	6%	2.3%	2.7%
Huntersville	36.4%	36.4%	51.7%	52.2%	7.4%	7%	4.5%	4.4%
Raleigh	22.6%	20.7%	67%	67.7%	5.6%	6.5%	4.8%	5.1%
Wilmington	40.3%	37.7%	51.5%	54.2%	5.3%	4.2%	2.9%	3.9%

Fig. 7: Combined Race Results, Missing Persons Tweets Excluded



Furthermore, there were no significant differences between the race results of Researcher 1 and Researcher 2 when missing persons information was excluded. See Figures 8 and 9 below for comparison.

Fig. 8: Researcher 1, Missing Omitted

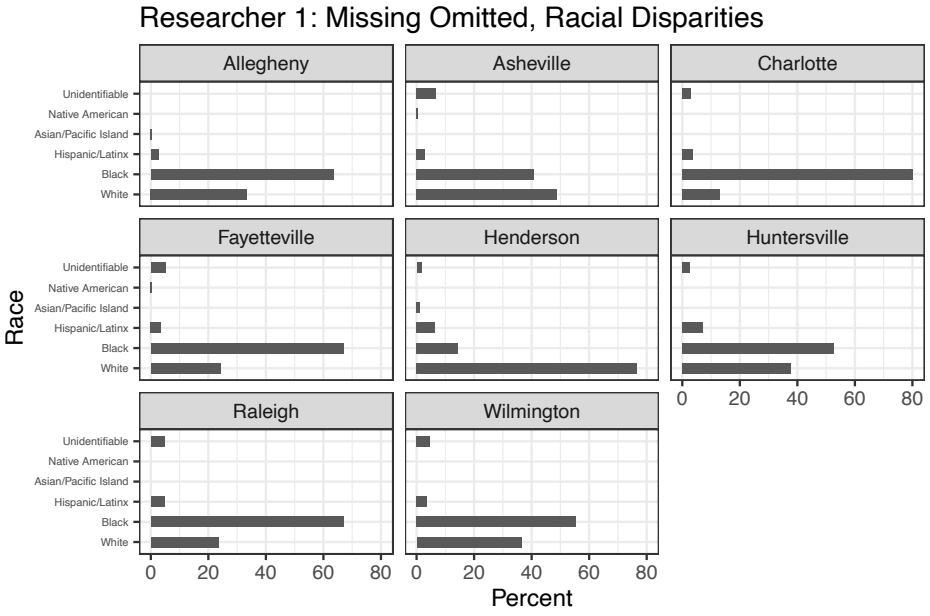
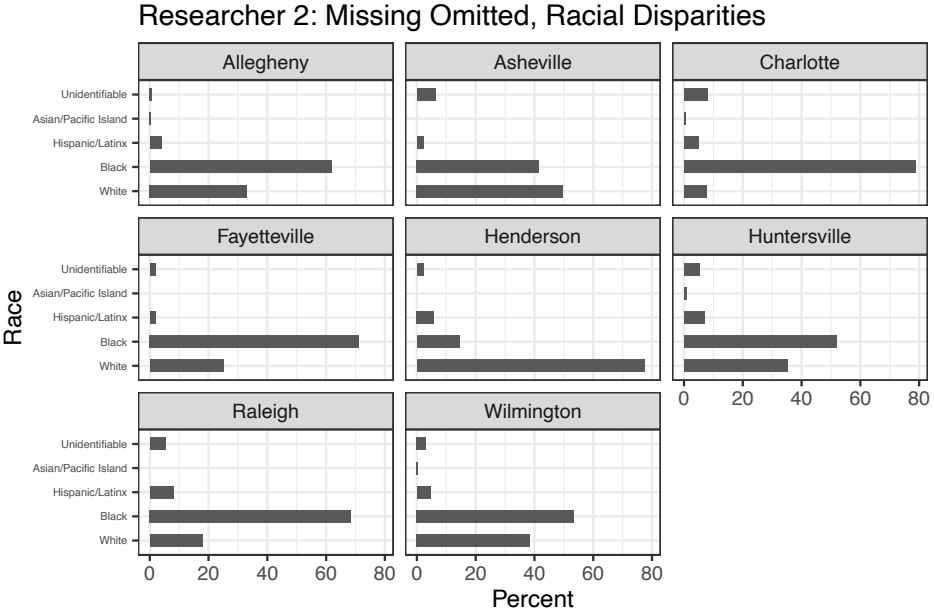


Fig. 9: Researcher 2, Missing Omitted



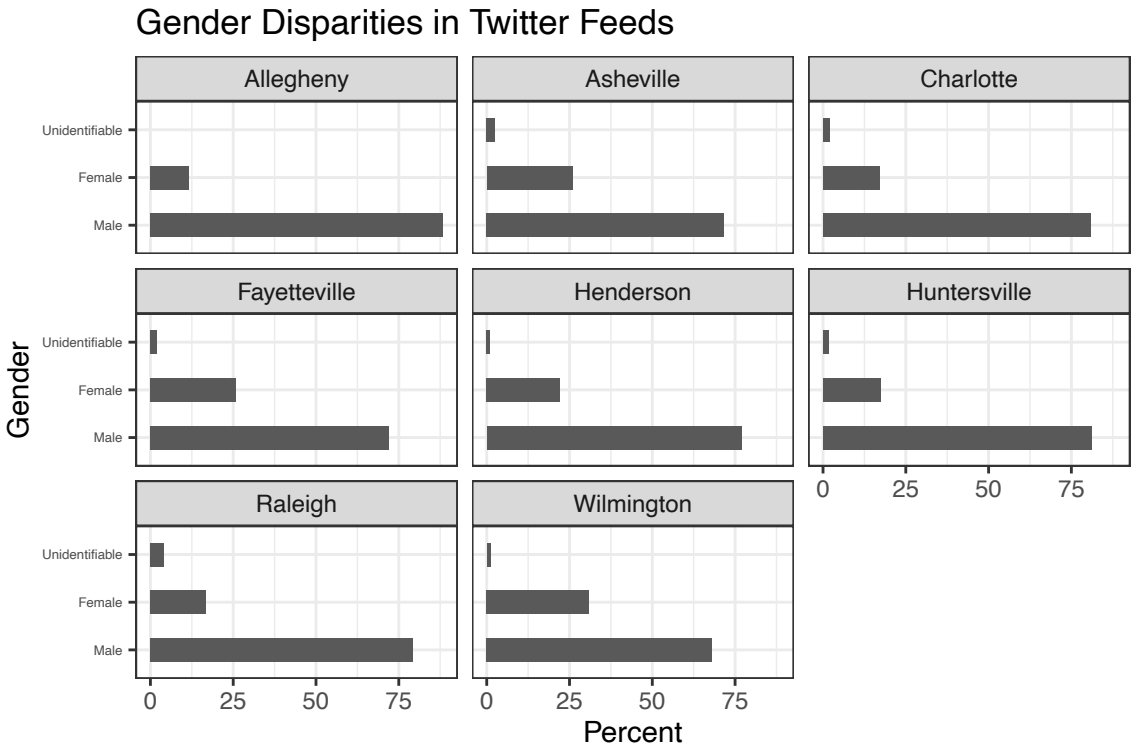
In addition to race variables, researchers also coded for gender. For the purposes of this research, only the binary male or female genders were used. It is difficult to account for nonbinary genders upon visual cues alone when pronouns are not published with the images.

Images of men overwhelmingly outnumbered images of women featured (see Figure 10). In Allegheny, men accounted for 88.3% of the people featured compared to 11.7% women. Huntersville had the second-highest ratio of men-to-women with 81% men, and Charlotte had 80.8% men. In Raleigh 79.3% of the people featured in the images tweeted were men, 76.9% in Henderson, 72.2% in Fayetteville, 71.6% in Asheville. Wilmington had the smallest ratio of men featured, but still 68% of the people in the images tweeted were male. Across all municipalities the actual percentage of the population that was female according to U.S. Census Bureau data was close to 50%. Wilmington had the highest percentage of women at 53.6%, and Fayetteville had the lowest at 49.7%. Neither percentage is significant enough to have an impact on who the law enforcement agencies would be posting on their Twitter accounts. Figure 11 shows the combined results of the spread of the gender disparities for each account featured. There were no significant differences between the gender results of Researcher 1 and Researcher 2.

Fig. 10: Percent of Each Gender Featured Compared to Actual Population Demographics

Account	Male	Female	Unidentifiable	Actual Pop. Female
Allegheny	88.3%	11.7%	0%	50.4%
Asheville	71.6%	25.9%	2.6%	52.2%
Charlotte	80.8%	17.1%	2.1%	51.9%
Fayetteville	72.2%	25.8%	2.1%	49.7%
Henderson	76.9%	22.1%	1%	52%
Huntersville	81%	17.4%	1.7%	50.9%
Raleigh	79.3%	16.7%	4.1%	51.8%
Wilmington	68%	30.9%	1.1%	53.6%

Fig. 11: Combined Gender Results from the Two Coders



Discussion

The racial disparities present in the images posted by police departments and sheriff offices Twitter accounts are both glaring and concerning. Over half of all people featured in these images were Black for six of the eight accounts studied. That is quite significant, especially considering that all six of those departments are in predominantly-white counties. The demographics of who is posted on these law enforcement Twitter accounts is not reflective of general population demographics.

An argument could be made that some of the disparities present in the demographics of who is featured in the images of law enforcement Twitter accounts stems from the demographics of who is charged with crimes. Much research has been done that shows that Black people are disproportionately represented more in the justice system (Hinton, et al. 2018). It is possible that

some of the racial bias discovered in this data study is the result of the already disproportionate representation of Black people in the justice system. In order to judge the extent to which the demographics of the people posted on law enforcement Twitter accounts reflect the demographics of the people charged with crimes, ACIS data was consulted.

Data from the ACIS Criminal and Infraction Statistical Extract from the North Carolina Administrative Office of the Courts has information on all criminal charges from 2016 to 2020 by county. The data contains information on all charges, so if one person was arrested with multiple charges a new data point was created for each charge. While helpful, this data is an imperfect match for the specific jurisdictions studied in this report. Still, it provides general context for demographics of who is getting arrested and charged in North Carolina.

Figure 12 shows the comparison between this ACIS data and the demographics of the people featured on the law enforcement Twitter accounts included in this study. The gray columns are the race demographic percentages determined by charge information collected from 2016 to 2020. The percent race Twitter columns are a reiteration of the combined race results first depicted in Figure 2. The ACIS data is on a county-wide basis, not a city or town basis. This means that the area covered by the ACIS data does not line up exactly with the jurisdiction of the law enforcement departments studied. The Asheville row shows data from Buncombe County, Charlotte is reflective of Mecklenburg, Fayetteville is reflective of Cumberland, Raleigh is reflective of Wake, and Wilmington is reflective of New Hanover. Huntersville is a town located just outside of Charlotte and thus there is no independent ACIS data for that municipality. Even though the regions are imperfect, these numbers help give a sense of the general demographics of who is charged with crimes in these regions of the North Carolina.

Fig. 12: ACIS Demographics of Charges Compared to Demographics of People Featured in Images of Law Enforcement Twitter Accounts

Account	% Black ACIS	% Black Twitter	% White ACIS	% White Twitter	% Hispanic ACIS	% Hispanic Twitter	Pop. Black Census
Allegheny	3.1%	62.5%	71.4%	33.5%	19.1%	9.9%	1.8%
Asheville	17.3%	34.6%	72.7%	58.3%	7.5%	6.8%	11.2%
Charlotte	58.3%	78.5%	25.8%	12.7%	12.6%	14.3%	35.2%
Fayetteville	59.3%	68.8%	29.3%	24.5%	5.2%	12.4%	42.1%
Henderson	11.3%	14.3%	71.6%	77.4%	13.6%	6.88	66.7%
Huntersville	-	51.7%	-	36.4%	-	6.7%	12.5%
Raleigh	46.1%	67%	34.2%	22.6%	11%	11.2%	29%
Wilmington	27.2%	51.5%	56.7%	40.3%	6.4%	6.3%	18.4%

This comparison is not fully accurate, and future study would be required to directly compare who is posted on these Twitter accounts to who the departments arrest. In order to obtain that information, several public records requests (FOIAs) may need to be filed. Though a time consuming and a sometimes-costly process, this would be an important number to have for further research.

Regardless of limitations of the ACIS data, it is clear that the demographics of the people featured in the law enforcement Twitter accounts studied are not an exact reflection of who is charged with committing crimes. Not a single one of the accounts studied posted straight mugshots of every crime that was committed in its jurisdiction. That's not reflective of the purpose of these law enforcement Twitter accounts and would be a waste of time for the person running the account. Instead, the people that were featured were largely people with multiple outstanding warrants, people law enforcement were seeking identification on, people who had committed significant or newsworthy crimes, and missing persons alerts. The Twitter accounts

were also used as a method of polling the public to attempt to determine identity, information, and location of people suspected of crime. The Twitter accounts were also used in part as a publicity stunt to feature captured persons or arrested persons who had made headlines as well.

If a Twitter user is passively scrolling through their Twitter feed, and all that they seeing getting posted by police departments and sheriff offices is images of Black men, that creates implicit bias. Passive Twitter users may not even notice the racial disparities in who is featured by these law enforcement Twitter accounts, but in the back of their mind they would likely start associating images of Black faces with crime. Even when the context for some of the tweets varies — for example some were of missing persons alerts — it is still quite significant when the majority of the faces depicted in images on law enforcement Twitter accounts are primarily Black. Black men are already the demographic group most associated with crime, and bias in who law enforcement depicts on their social media accounts only contributes to that narrative.

Additionally, the fact that these images are being posted directly by police and sheriff social media accounts may provide more credibility to the images that are being posted for passive users who may not think to question what's being posted. There has been an uproar of demands for multi-faceted police reform in recent years, but the people who are calling for change are likely not the primary followers of these law enforcement accounts. For people who are already supporters of police who follow these accounts, their already-existing bias against Black people is likely only reinforced by the images these departments choose to post.

Not only are the disparities uncovered in this report concerning, they are dangerous. Black people, and Black men especially, are being killed because of racist stereotypes that associate them with crime. When these accounts post primarily images of Black people, they are

contributing to that narrative of "Black people do crime" that has caused people to justify their violence, like the three men who murdered Ahmaud Arbery.

Limitations

It is important to note some of the limitations of this study. Each image was hand-coded by two researchers in order to determine the race and gender of the persons missing. There is always some subjectivity in the identification of race and gender based solely on the image of a person. While some of the accounts would include race information in the text of the tweet or as an image caption, not every image explicitly said what race the people featured were. A second researcher was brought into this project in order to account for potential bias in the identification of race and gender. Though there was strong reliability among the two coders, additional researchers coding over the same set of images may further reduce bias. The main researcher for this report is a white female. The research assistant who independently coded the images in order to boost reliability is a mixed Black/Asian female. In general, the race of the researcher may cause some implicit bias in coding the images, so if additional researchers are brought on to further boost reliability they should be racially and ethnically diverse.

Additionally, it is important to consider the potential causes of the racial disparities in the social media feeds. Who is in charge of the police department and sheriff offices Twitter accounts and how are they managed? It may be just one intern in the back of a police department posting tweets here and there on cases that they find interesting, or it may be an automated system. How do their PR teams determine what information gets posted? All of these questions lend themselves well to further research and study and help contextualize the findings of this report.

Future Study

It would be beneficial to broaden the scope of this research to police departments and sheriff offices across the nation. North Carolina is a fairly Republican-dominated state with large Liberal cities scattered throughout. Racial disparities in law enforcement social media accounts likely differ in states like California versus Texas. There likely are state-by-state and even county-by-county population demographics that affect who is posted. Additionally, this study solely investigates Twitter accounts. Facebook is an entirely different media market, especially in terms of its users. It would be beneficial to apply similar methods from this study on N.C. law enforcement Twitter accounts to Facebook accounts.

Furthermore, though this study has established that racial disparities do exist in the images posted by police departments and sheriff offices on their official Twitters, what is the impact of that for passive users? It may be useful to set up a study in which Twitter users were presented with a diverse Twitter feed and a racially-biased Twitter feed and were asked to answer questions that would measure the impact of the two feeds.

Overall, this study has found that there are racial disparities in the people that are featured on law enforcement Twitter accounts in North Carolina. These racial disparities are telling of the systematic racism ever present in the United States today and the problems Black men across the country face with being perceived as criminals. There are so many facets of today's modern society in which implicit and explicit biases and racism is forged that criminalizes Black people. The posts put out by police departments and sheriff offices on their social media is a strong, telling example of places where these biases manifest.

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