

# BIAS

## Against Asian, Black, Hispanic/Latino, Jewish, and Muslim Communities on X/Twitter

Research Report December 2023  
Indiana University Bloomington



## Contributors

Sydney Allen, Hundre Askie, Norah Bardol, Olivia Baren, Samuel Barth, Emma Bender, Noam Biron, Kendyl Bond, Graham Brumley, Kennedy Bruns, Leah Burger, Hannah Busche, Morgan Butrum-Griffith, Zoe Catlin, Angeli Cauley, Nathalya Chavez Medrano, Mia Cooper, Suhani Desai, Isabella Flick, Samantha Garcez, Isabella Grady, Macy Hutchinson, Sarah Kirkman, Ella Leitner, Elle Marquardt, Madison Moss, Ethan Nixdorf, Reya Patel, Mickey Racenstein, Kennedy Rehkla, Grace Roggeman, Jack Rossell, Madeline Rubin, Fernando Sanchez, Hayden Sawyer, Diego Schecker, Lily Schwecke, Brooke Scott, Megan Scott, Samantha Secchi, Jolie Segal, Katherine Smith, Constantine Stefanidis, Cami Stetler, Madisyn West, Alivia Yusefzadeh, Tayssir Aminou, Karen Fecht, Gunther Jikeli, Luciana Orrego-Hoyos, Hannah Pickett, and Sophia Tracy.

**Computational support:** Sameer Karali and Katharina Soemer.

**Project coordinator:** Gunther Jikeli

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# Executive Summary

Hate speech on social media has been identified as a social problem. However, it is difficult to quantify how widespread hate speech is. We looked at conversations on X/Twitter about Asian, Black, Jewish, Hispanic/Latino, and Muslim communities.

From the Twitter archive, we selected all tweets from 2021 and 2022 containing the keywords Asians, Blacks, Jews, Latinos, or Muslims, totaling almost 70 million tweets. For each of the keywords and each year, we drew a random sample of 600 tweets and annotated them manually. The annotation included classifying the tweets as biased, as expressing negative or positive feelings toward the respective communities, and whether or not the tweet called out bias. Biased tweets were further classified by selecting from a list of stereotypes. Students annotated 300 tweets each. Three to ten students (five in most cases) annotated the same tweets. The labeled datasets will be made public so that they can be used in AI-based methods for automatic hate speech identification.

Using 75% agreement between annotators, we found between 2 and 11 percent of tweets were biased, depending on the keyword and year. Using 51% agreement between annotators, we found between 6 and 19% of the tweets were biased. However, there were even more tweets calling out bias against these minority groups, between 12 and 31 percent at 75% agreement between annotators. In conversations about Asian, Latino, and Muslim communities, the level of bias was higher in 2022 than in 2021. In conversations about black and Jewish communities, the level of bias was higher in 2021.

The types of stereotypes vary widely across the different categories of bias. While about a third of all biased tweets were classified as "hate" against the minority, the stereotypes in the tweets often matched common stereotypes about the minority. Black people were seen as lazy and associated with crime. In 2021, Asians were blamed for the pandemic. Jews were seen as powerful and there were justifications for harming Jews. Hispanics/Latinos were portrayed as being in the country illegally and as "invaders," in addition to stereotypical accusations of being lazy, uneducated, or having too many children. Muslims, on the other hand, were often collectively blamed for terrorism and violence, though often in conversations about Muslims in India. Muslims were also accused of wanting to destroy the West.

# Methods

**Raw data:** All live tweets from 2021 and 2022 with the keywords “Asians, Blacks, Latinos, Jews, and Muslims” (68 Million tweets).

**Representative samples** of 600 tweets for each of the five keywords for 2020 and 2021.

**Annotation** of the representative samples in subsamples of 100 (+5 manually added biased tweets) by contributing students. Three to ten students (five in most cases) annotated the same sample.

Annotators used a scale from 1 to 5 (confident not biased, probably not biased, don't know, probably biased, confident biased). Bias definitions for each category can be found in the annex. All annotators annotated 300 tweets or more. We used an annotation portal to see the tweet in its “natural” context, see [annotationportal.com/](https://annotationportal.com/).

All annotators took the course "White Supremacism and Antisemitism on Social Media" at Indiana University Bloomington in the fall of 2023, taught by Gunther Jikeli, Clair Padgett, and Nicolette van den Bogerd.

# Number of scraped tweets for five keywords in 2021 and 2022

keyword	# of tweets in 2021	# of tweets in 2022	# of tweets in 2021-2022
Asians	3,931,977	2,057,267	5,989,244
Blacks	4,382,517	4,400,854	8,783,371
Jews	7,949,662	10,113,342	18,063,004
Latinos	1,053,486	1,441,042	2,494,528
Muslims	14,259,221	18,837,884	33,097,105
SUM	31,576,863	36,850,389	68,427,252

## Annotation form for potentially anti-Black biased tweets

Viewing Tweet #1 of Blacks2021-4

**Still exists:**  Is the tweet active?

**Can read:**  Tweet is in the correct language?

Anti-Black bias is a certain perception of black people or African Americans, which may be expressed as racial degradation or hatred toward Blacks or African Americans. Rhetorical and physical manifestations of anti-Black bias are directed toward black or perceived black individuals and/or their property or toward black community institutions. Contemporary examples of anti-Black bias in public life, the media, schools, the workplace, and in the religious sphere could, taking into account the overall context, include, but are not limited to the examples below.

**If you think that this tweet is anti-Black, select from below:**

**Denies:**  Not biased according to the definition but denies that there is bias against Black people.

**Content type:**  Main content type of tweet that indicates possible anti-Black bias

**Sentiment rating:**  The sentiment toward Blacks/African Americans is

**Calling out:**  This tweet is calling out (alleged) anti-Black bias

**Sarcasm:**  This tweet is sarcastic

**Additional comments:**

View your annotated tweets :

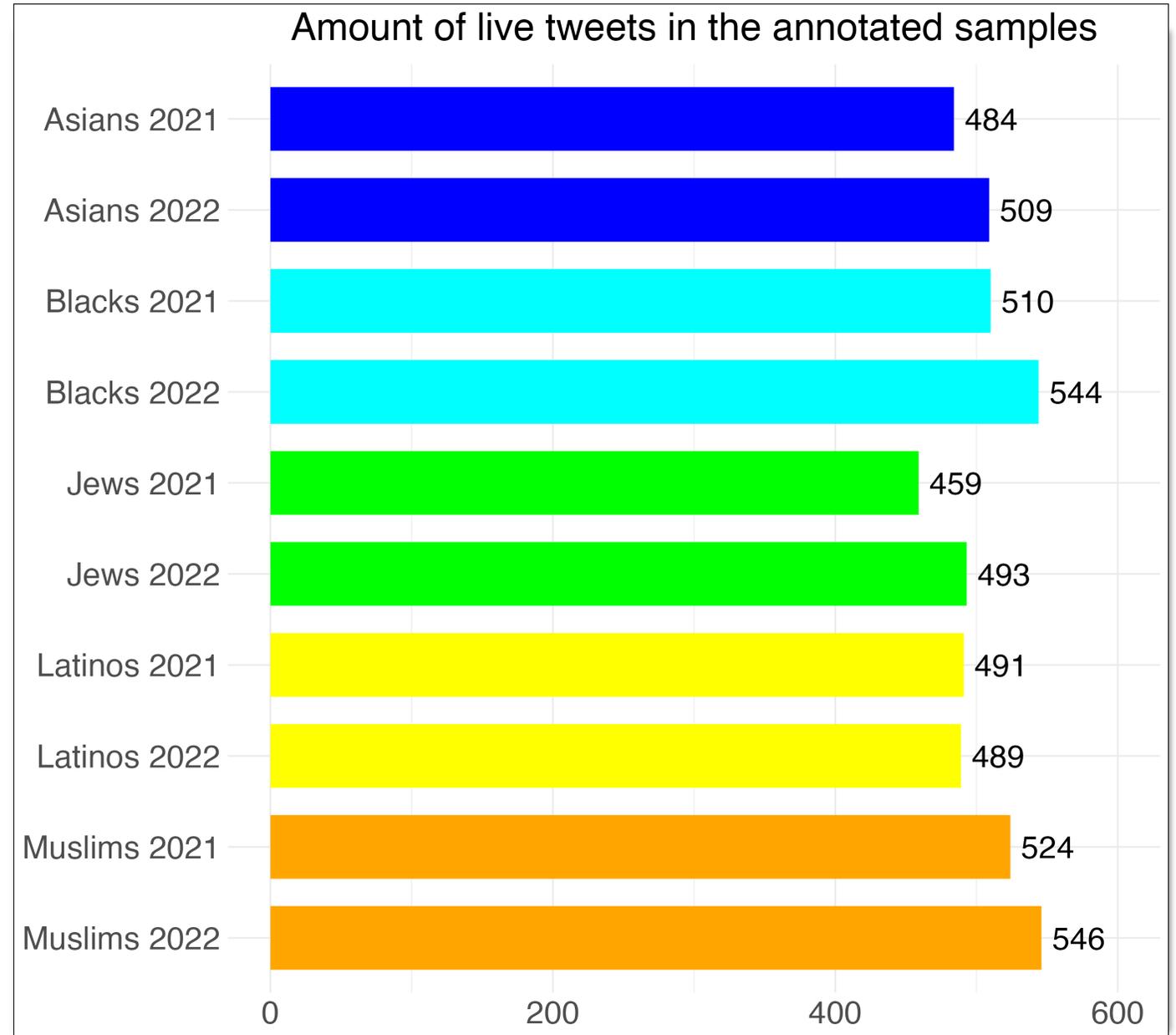
1

Your annotated tweets count reached to : 1 / 105.



# Overall Tweets

Total number of annotated tweets (number less than 600 due to deletions or incorrect language)

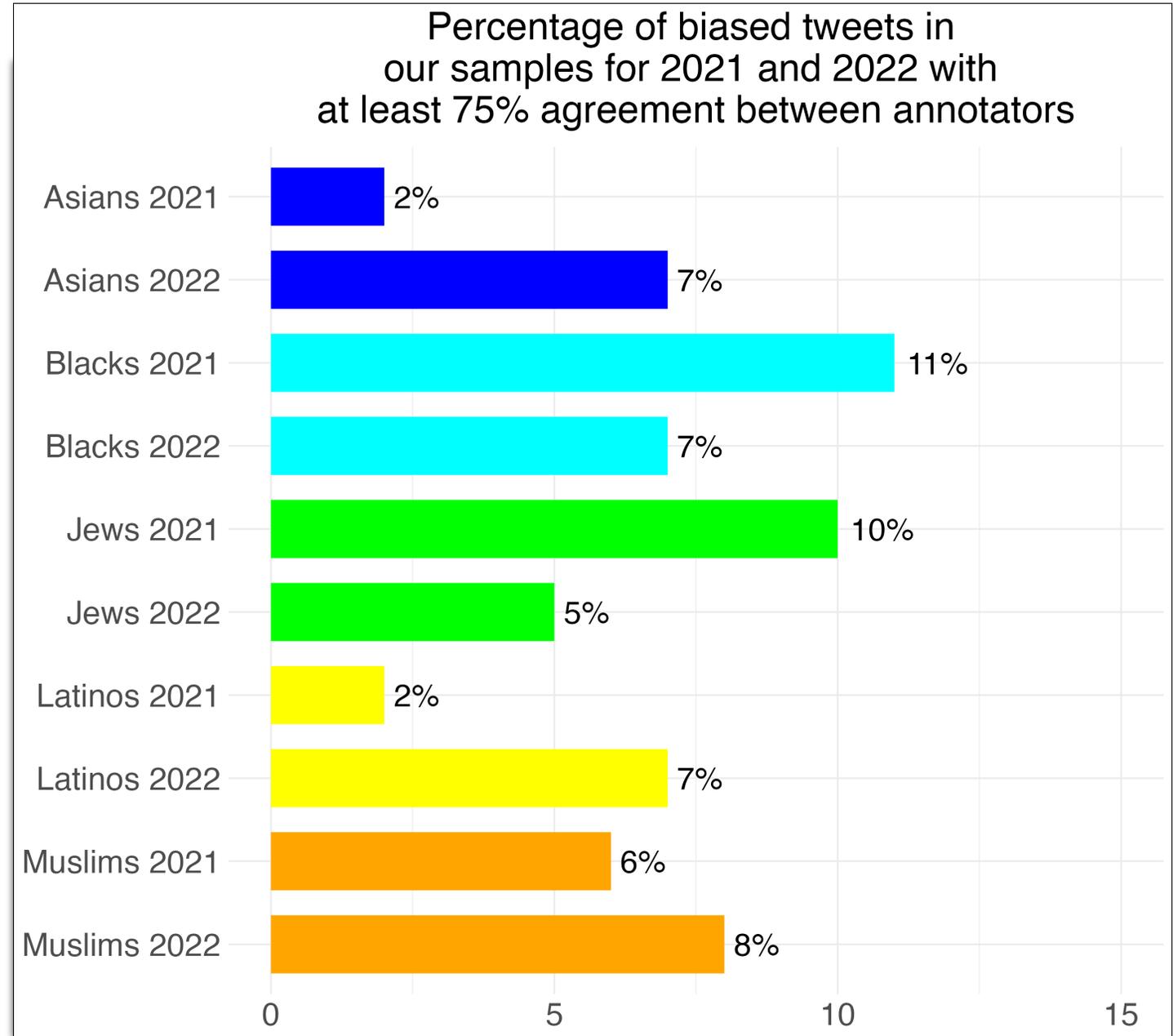


## Results: Bias

Biased tweets in conversations on Twitter with the keywords “Asians, blacks, Latinos, Jews, and Muslims,” based on representative samples of tweets with those keywords.

Caution: Comparing the percentages of bias against different groups might be misleading! The keywords do not equally represent conversations about these minority groups.

“Muslims, Jews, blacks” are more colloquial terms than “Asians and Latinos.”

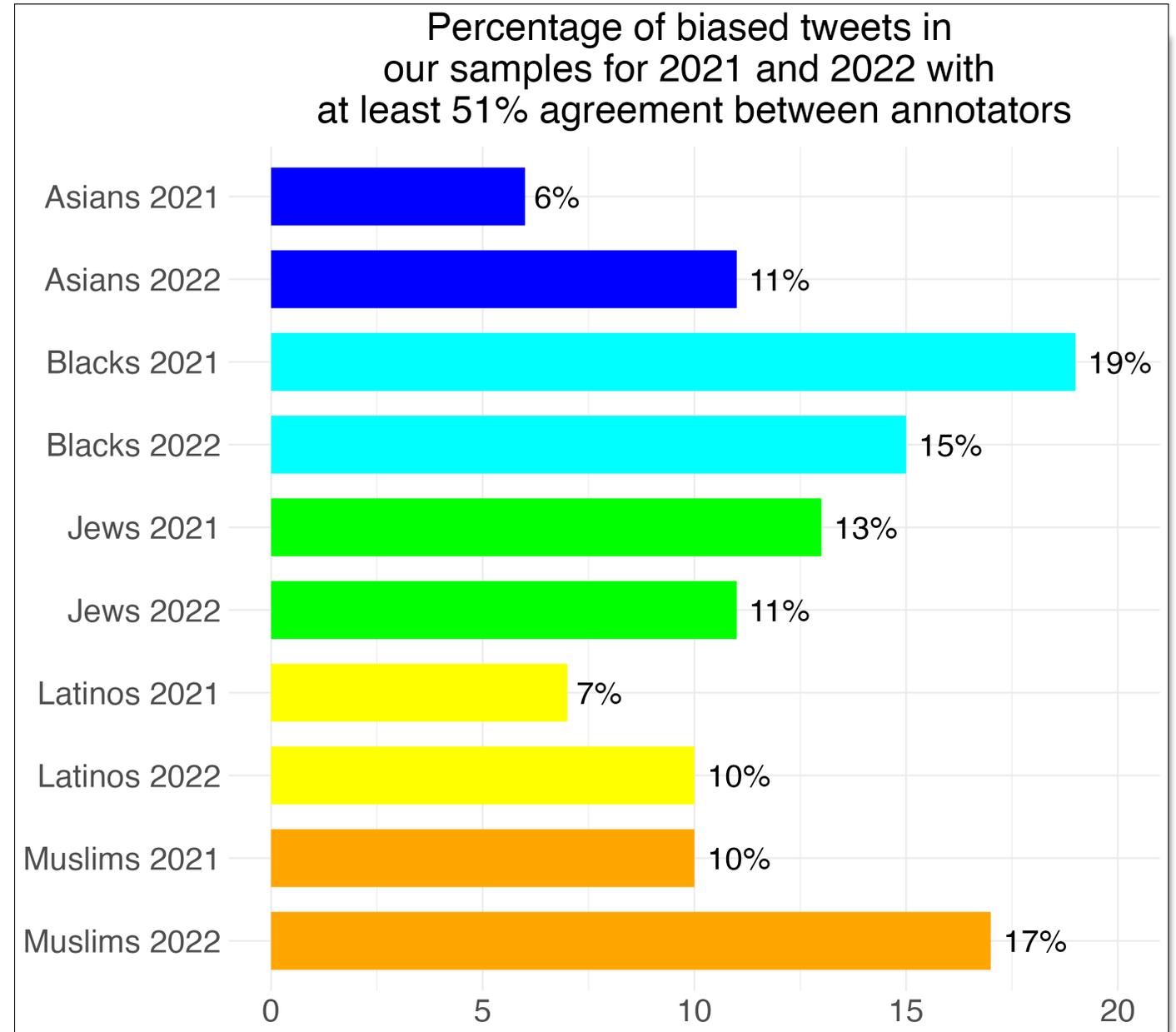


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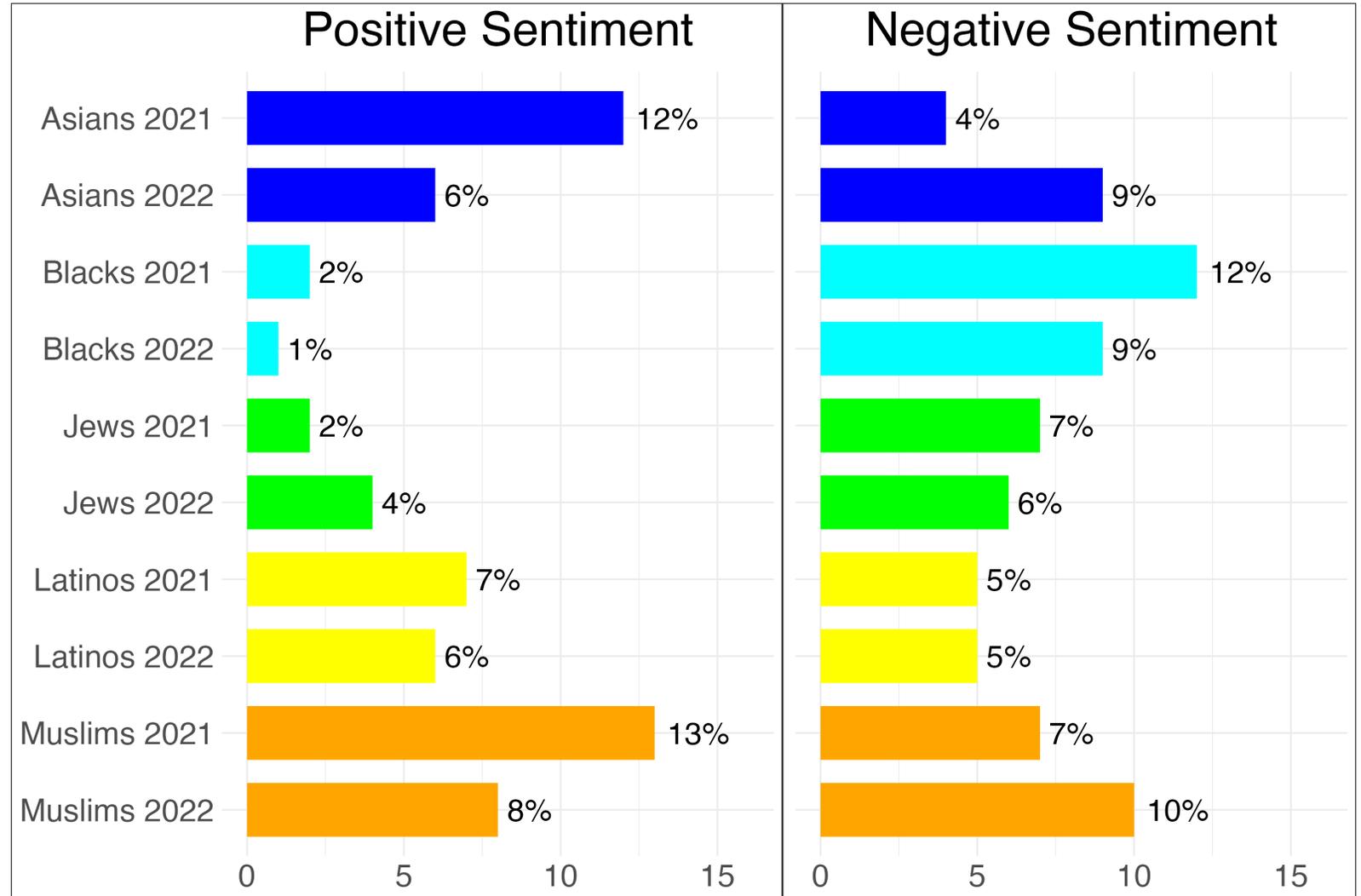
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# Results: Sentiment Analysis

Apart from the fact that tweets can be biased or call out bias, they can also transport positive or negative sentiment.

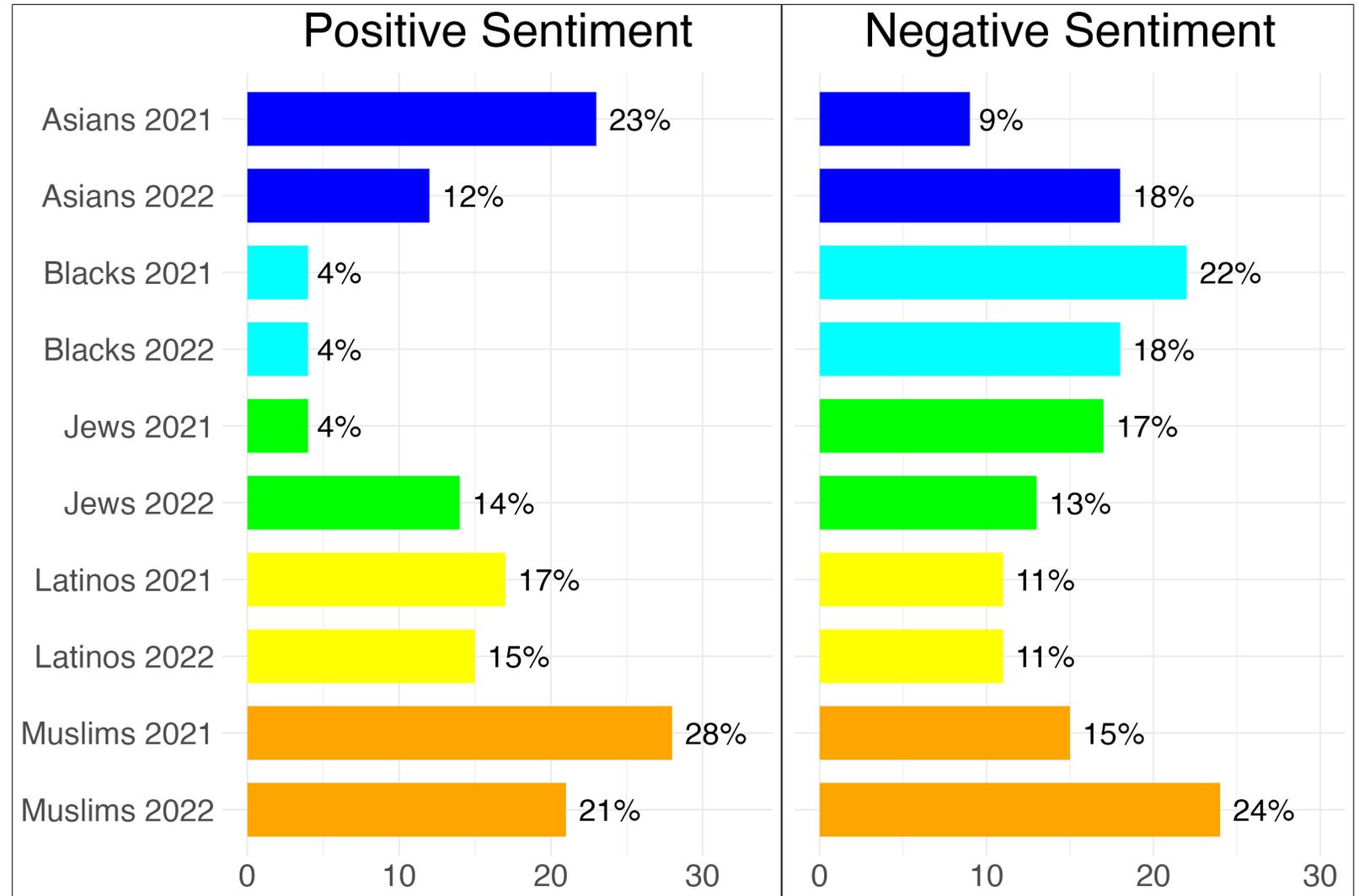
Percentage of tweets transporting positive and negative sentiment with at least 75% agreement between annotators



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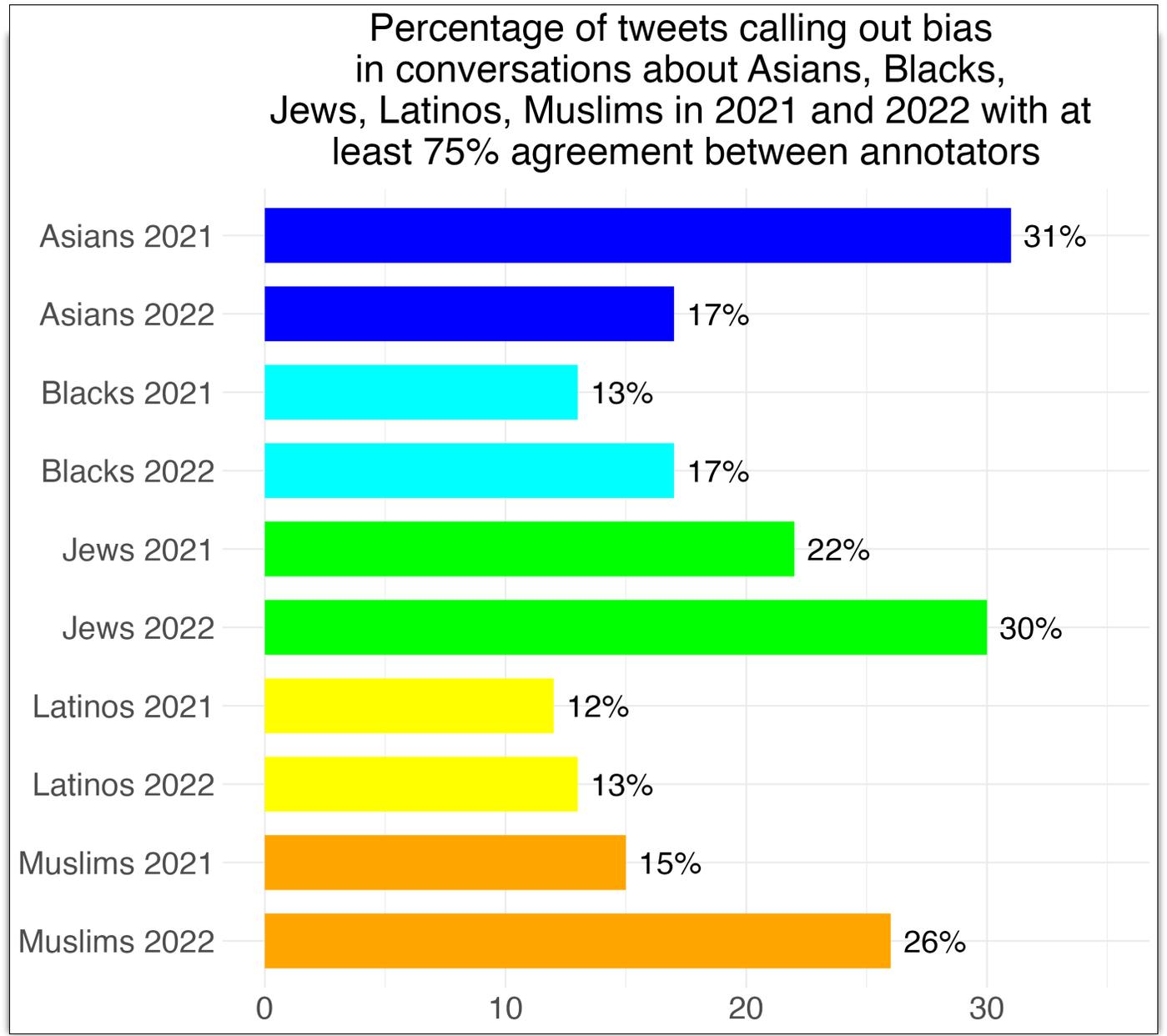
Percentage of tweets transporting positive and negative sentiment with at least 51% agreement between annotators



# Results: Calling out bias

Tweets calling out bias against Asians, black people, Latines, Jews, and Muslims, based on representative samples of tweets with those keywords.

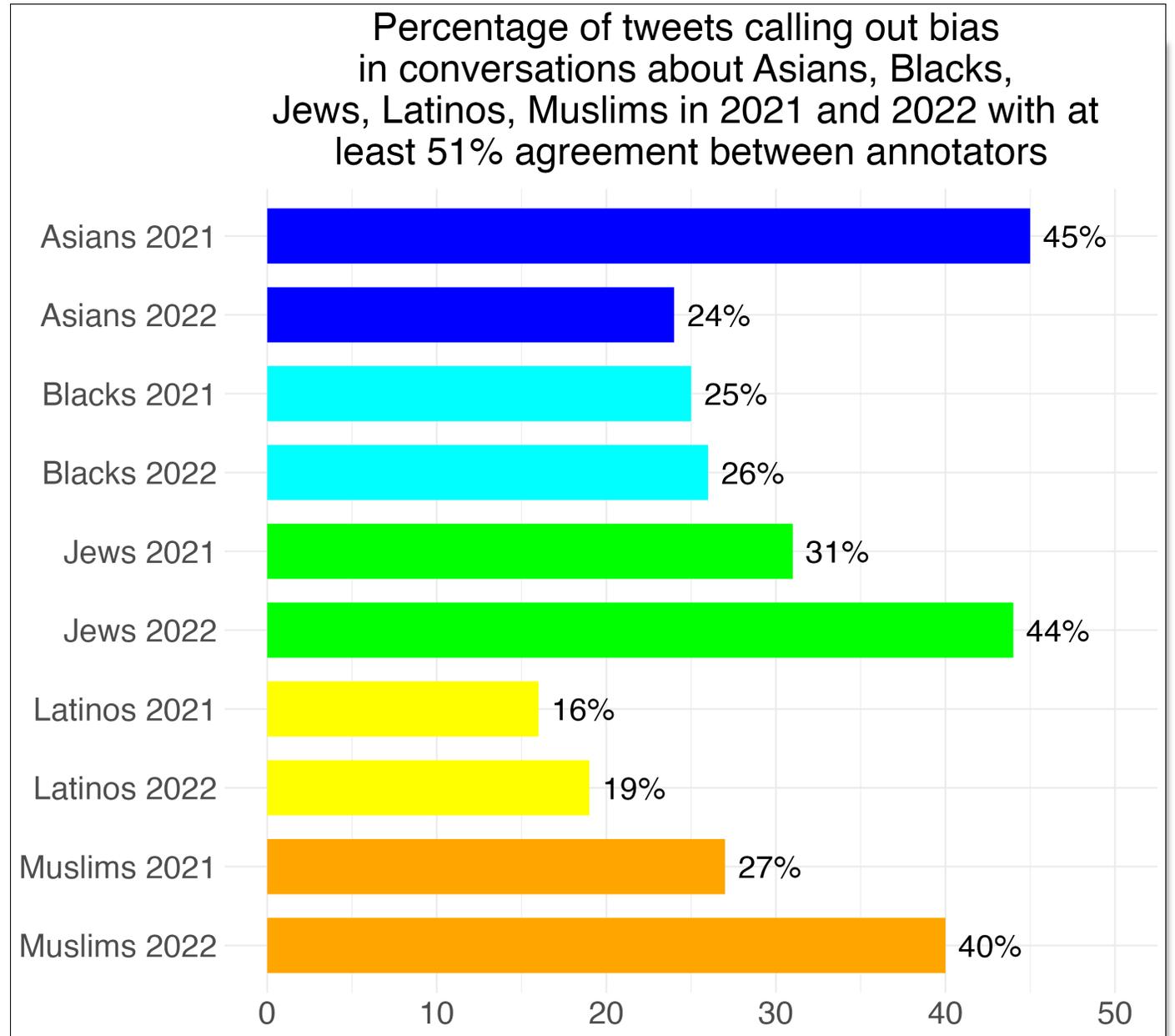
Caution: Comparing the percentages of calling out bias against different groups might be misleading! The keywords do not equally represent conversations about these minority groups.



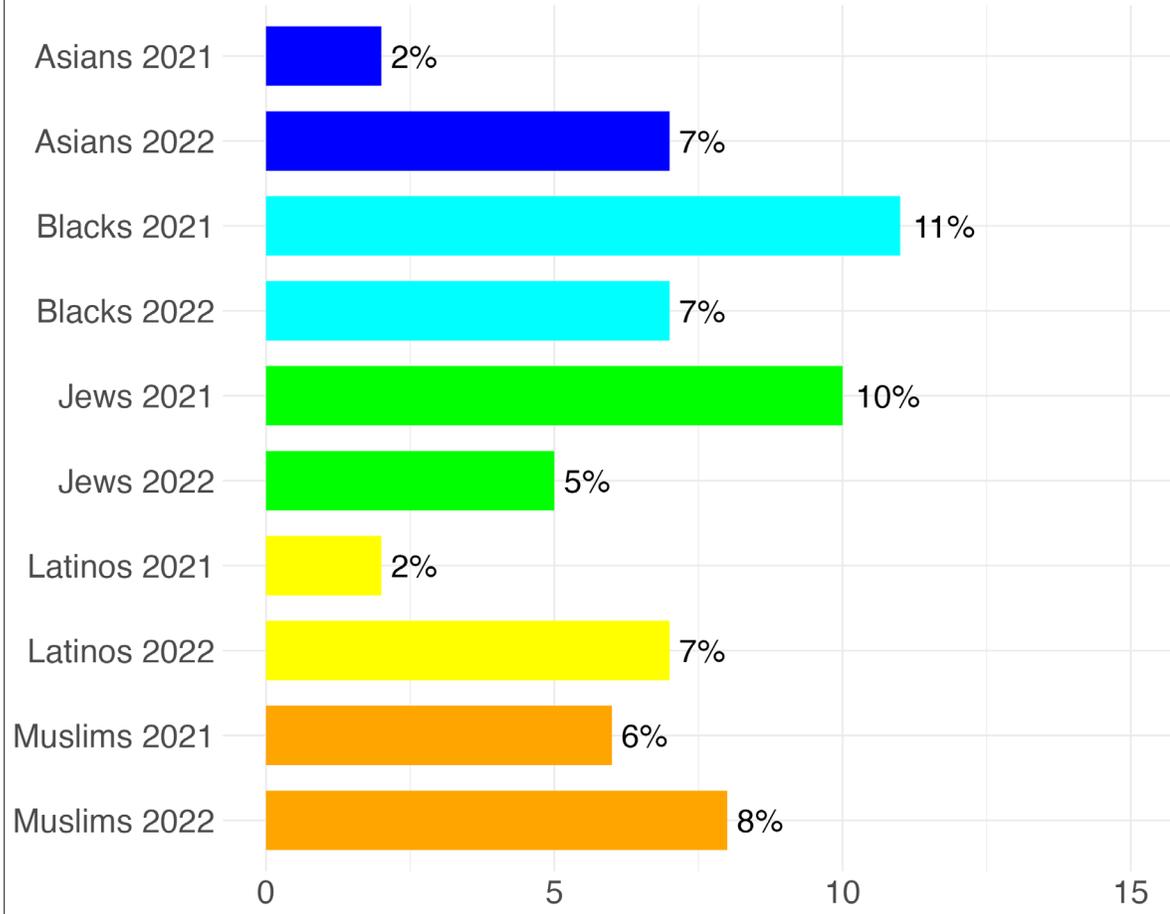
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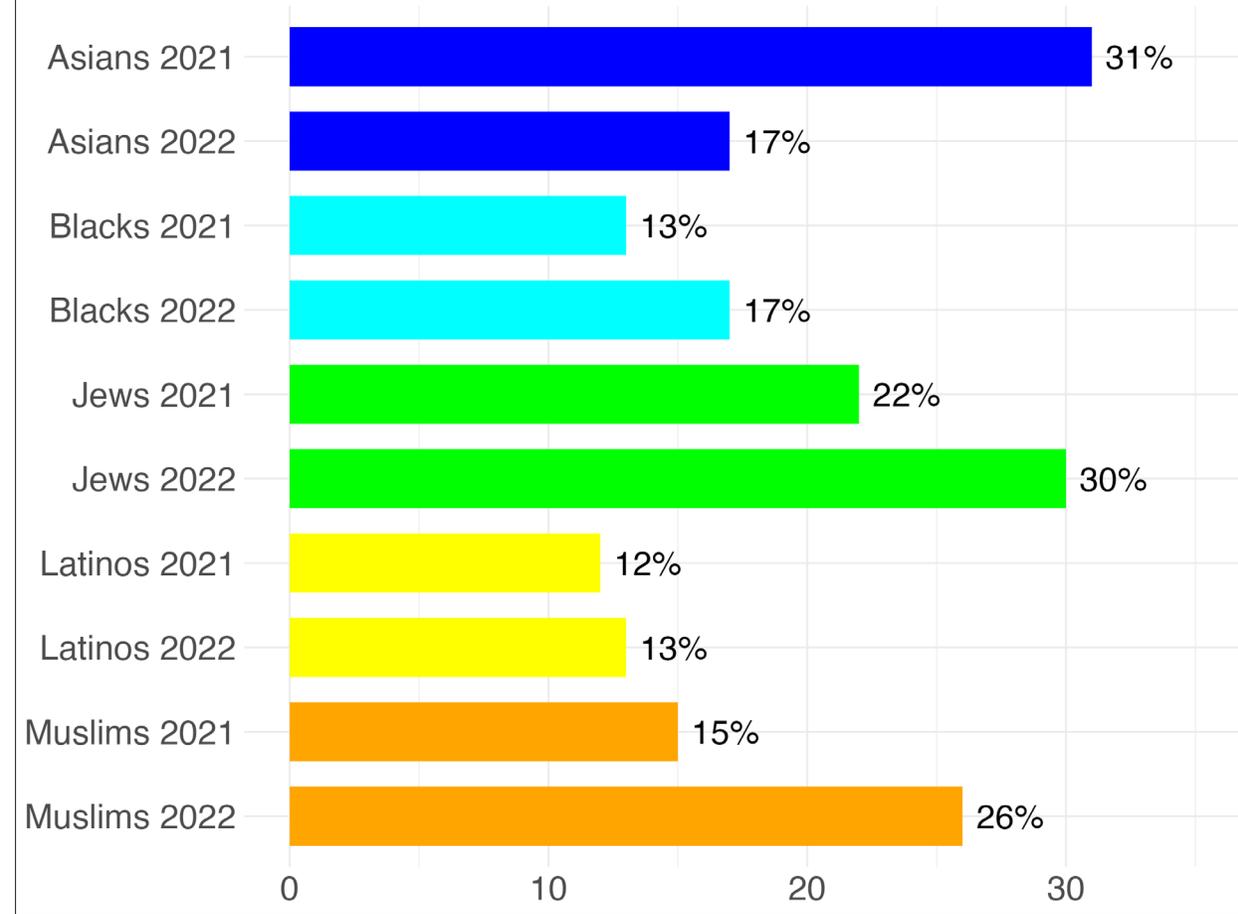
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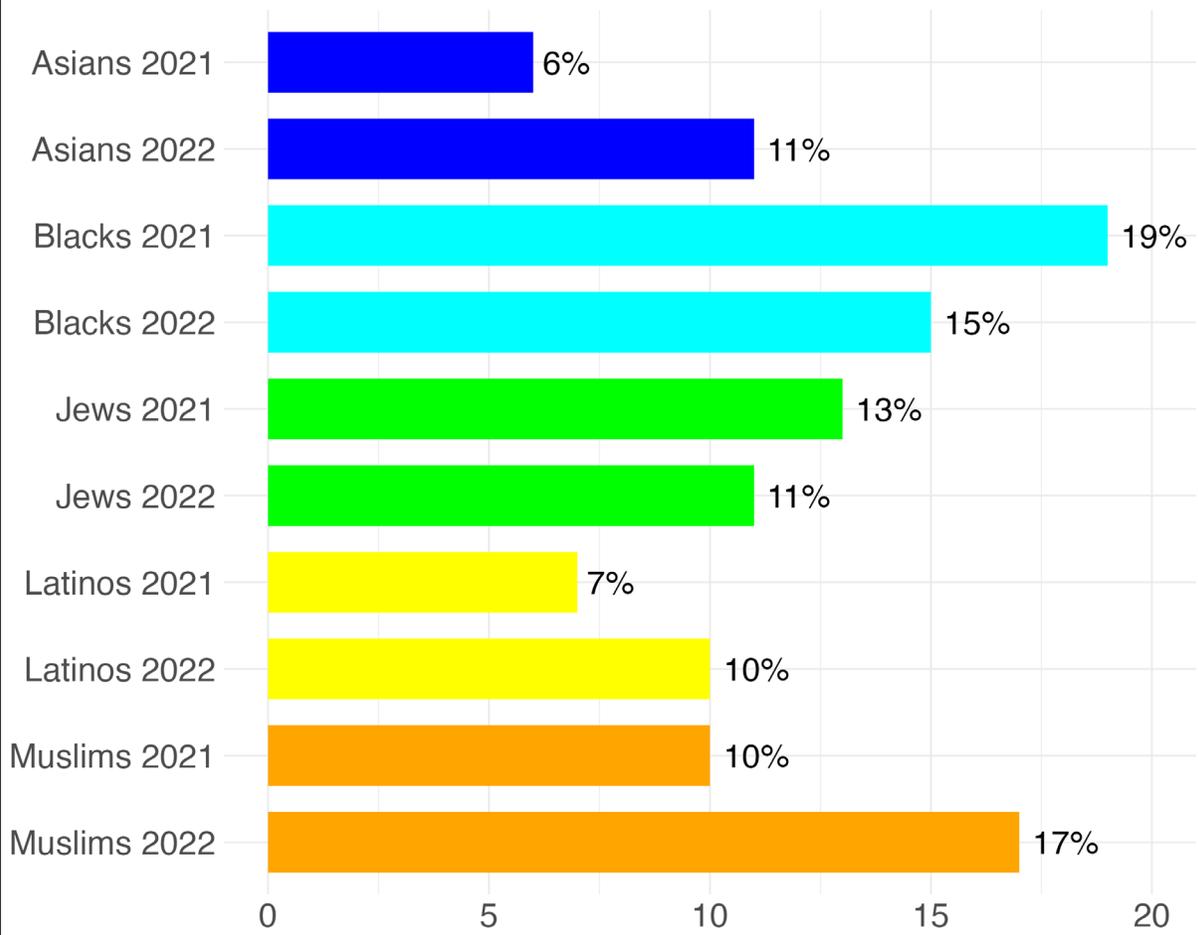
Percentage of biased tweets in our samples for 2021 and 2022 with at least 75% agreement between annotators



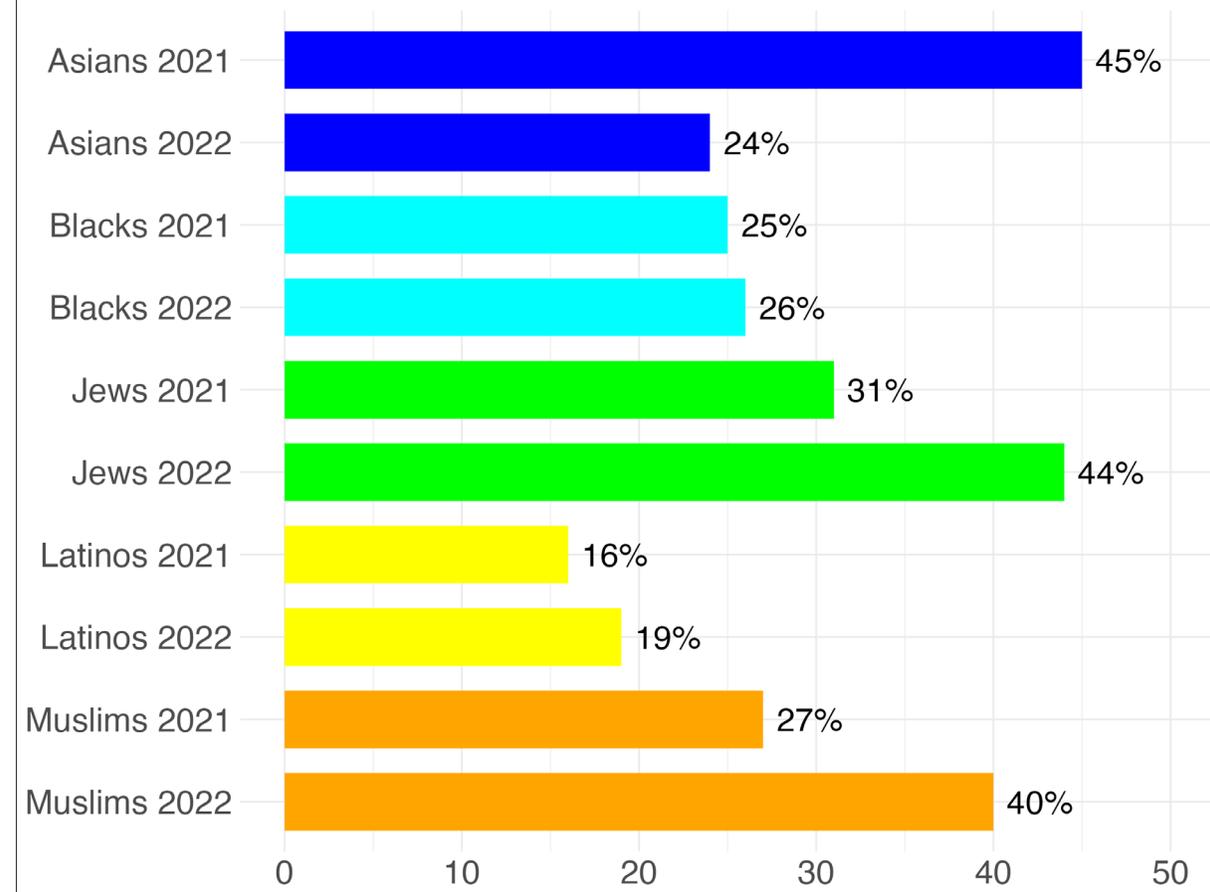
Percentage of tweets calling out bias in conversations about Asians, Blacks, Jews, Latinos, Muslims in 2021 and 2022 with at least 75% agreement between annotators



Percentage of biased tweets in our samples for 2021 and 2022 with at least 51% agreement between annotators



Percentage of tweets calling out bias in conversations about Asians, Blacks, Jews, Latinos, Muslims in 2021 and 2022 with at least 51% agreement between annotators



## Annotation difficulties

Annotators reported that they had difficulties in labeling discussions within and between minority groups, such as discussions among Black people about racism or discussions between Asian and Black people.

Some annotators used the label “general hate” when they suspected bias but couldn't tell which biased argument would apply.

A stricter definition of biases and a stricter application of the definitions might have reduced the percentage of biased tweets in all categories.

# The Three Most Frequently Selected Sections of Each Bias Definition

## Anti-Asian

- Hatred against Asians (e.g., **slurs**)
- “Positive” stereotyping (e.g., all Asians are intelligent or unduly privileged).
- Blaming Asians in general or Chinese Americans for **COVID**

## Anti-Black

- Hatred against Black people (e.g., slur, promoting "**White Power**" or saying that Black people are evil)
- **Stereotypical allegations** about Black people (e.g., lazy, dirty, uneducated, stupid, criminal, drugs, drunkards, or violent)
- Other anti-Black stereotypes

## Anti-Jewish

- Hatred towards Jews
- Mendacious or stereotypical allegations about Jews + **Jewish power**
- Justifying harming of Jews in the name of a radical ideology

# The Three Most Frequently Selected Sections of Each Bias Definition

## Anti-Latino

- Hatred against Latinx/Hispanic/Mexican (e.g., **slur**)
- Xenophobic stereotypical allegations (e.g., illegal, "**invaders**," don't belong in the country, refuse to learn English, steal jobs), closely followed by
- Characterizing Latinx/Hispanics as criminal, lazy, **uneducated**, ungrateful, stupid, having too many children.

## Anti-Muslim

- Blaming all Muslims for terrorism and violence (e.g., **blaming all Muslims for Islamist terror groups** or associating all Muslim men with gang rape)
- Hatred against Muslims (e.g., **slur**)
- Accusing the Muslims of aiming to destroy the West or non-Muslim societies

# Acknowledgements

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Contact for more details: Gunther Jikeli, [gjikeli@iu.edu](mailto:gjikeli@iu.edu), Erna B. Rosenfeld Associate Professor, Institute for the Study of Contemporary Antisemitism | Borns Jewish Studies Program | Germanic Studies | Indiana University, [www.isca.indiana.edu](http://www.isca.indiana.edu)



# ANNEX Definitions

- **Anti-Asian Bias**
- **Anti-Black Bias**
- **Anti-Jewish Bias**
- **Anti-Latinx/Hispanic Bias**
- **Anti-Muslim Bias**

# Anti-Asian Bias

Anti-Asian bias is a certain perception of Asian people, which may be expressed as racial degradation or hatred toward Asians. Rhetorical and physical manifestations of anti-Asian bias are directed toward Asians or perceived Asian individuals and/or their property or toward Asian community institutions. Contemporary examples of anti-Asian bias in public life, the media, schools, the workplace, and in the religious sphere could, taking into account the overall context, include, but are not limited to the examples below.

This tweet is anti-Asian because one of these paragraphs applies (choose what fits best)

1. Hatred against Asians (e.g., slurs).
2. Justifying harming of Asians collectively (e.g., calling for deportation of all Asians)
3. Blaming Asians in general or Chinese Americans for COVID.
4. Claiming that Asian or Chinese people are a threat to "our" culture.
5. Using xenophobic language targeting Asians or Chinese ("flooding the country/institutions" or "go back to your country")
6. Characterizing all Asians/Chinese as cheaters, stupid, or bad drivers.
7. Associating all Asians with repulsive food culture (e.g., eating cats and dogs).
8. Making derogatory generalized claims based on physical attributes (e.g., skinny, "squinted eyes").
9. Stereotypical allegations about Asian women (e.g., "submissive," "promiscuous," exotic seductresses, predatory "gold diggers."
10. Stereotypical allegations about Asian men (asexual, predators of white women).
11. "Positive" stereotyping (e.g., all Asians are intelligent or unduly privileged).
12. Other anti-Asian stereotypes (name in comments).

not biased according to the definition but denies that there is bias against Asians.

# Anti-Black Bias

Anti-Black bias is a certain perception of black people or African Americans, which may be expressed as racial degradation or hatred toward Blacks or African Americans. Rhetorical and physical manifestations of anti-Black bias are directed toward black or perceived black individuals and/or their property or toward black community institutions. Contemporary examples of anti-Black bias in public life, the media, schools, the workplace, and in the religious sphere could, taking into account the overall context, include, but are not limited to the examples below.

This tweet is anti-Black because one of these paragraphs applies (choose what fits best)

1. Hatred against Blacks (e.g., slur, promoting "White Power" or saying that Blacks are evil).
2. Justifying harming of black people collectively (e.g., "Blacks should go back to Africa").
3. Justifying or downplaying racist policies in the past (e.g., segregation or slavery).
4. Implying that black people are racially inferior or a threat to "the white race."
5. Stereotypical allegations about Blacks (e.g., lazy, taking advantage of assistance, dirty, uneducated, stupid, criminal, drugs, drunkards, or violent).
6. Promoting myth of the "angry black woman" (aggressive, ill-tempered, illogical, overbearing, and hostile).
7. Promoting the myth of black men as predators of white women.
8. Stereotypical physical images (e.g., big lips/butt/breasts, monkeys, savages).
9. Endorsing blackface.
10. Alleging that all Black people grow up without a father.
11. "Positive" stereotyping, such as all black people are good dancers, fast runners, or strong.
12. Claiming all black people share certain opinions/preferences, e.g., love watermelons or chicken.
13. Other anti-Black stereotypes (name in comments).

not biased according to the definition but denies that there is bias against Black people.



# Anti-Jewish Bias (Antisemitism)

Antisemitism is a certain perception of Jews, which may be expressed as hatred toward Jews. Rhetorical and physical manifestations of antisemitism are directed toward Jewish or non-Jewish individuals and/or their property, toward Jewish community institutions and religious facilities. (IHRA Working Definition of Antisemitism)

The tweet is antisemitic because one of these paragraphs applies (choose what fits best)

1. Hatred towards Jews.
2. Justifying harming of Jews in the name of a radical ideology.
3. Mendacious or stereotypical allegations about Jews + Jewish power.
4. Blaming Jews as a people for what a single person or group has done.
5. Denying the fact, scope, mechanisms, or intentionality of the Holocaust.
6. Accusing the Jews/Israel of inventing or exaggerating the Holocaust.
7. Accusing Jews of being more loyal to Israel or to "Jewish priorities."
8. Denying the Jewish people their right to self-determination, e.g., "Israel is racist per se."
9. Applying double standards to Israel (sth. that is not expected of other nations).
10. Classic antisemitism (e.g., blood libel) to characterize Israel or Israelis.
11. Drawing comparisons of contemporary Israeli policy to that of the Nazis.
12. Holding Jews collectively responsible for actions of the state of Israel.

# Anti-Latinx/Hispanic Bias

Anti-Latinx bias is a certain perception of Latinx or Hispanic people, which may be expressed as racial degradation, xenophobia, or hatred toward Latinx. Rhetorical and physical manifestations of anti-Latinx bias are directed toward Latinx/Hispanic or perceived Latinx/Hispanic individuals and/or their property or toward community institutions. Contemporary examples of anti-Latinx bias in public life, the media, schools, the workplace, and in the religious sphere could, taking into account the overall context, include, but are not limited to the examples below.

This tweet is anti-Latinx/Hispanic because one of these paragraphs applies (choose what fits best)

1. Hatred against Latinx/Hispanic/Mexican (e.g., slur)
2. Justifying harming of Latinx/Hispanics/Mexicans collectively (e.g., calling for deportation of all Latinx/Hispanics/Mexicans)
3. Xenophobic stereotypical allegations (e.g., illegal, "invaders," don't belong in the country, refuse to learn English, steal jobs)
4. Characterizing Latinx/Hispanics as criminal, lazy, uneducated, ungrateful, stupid, having too many children.
5. Characterizing Latinas as generally "virginal," "passive," or "dependent on men."
6. Characterizing Latinas as generally "hot-tempered," "tempestuous," "promiscuous," or exotic seductresses.
7. Promoting myth of Latinos as predators of white women.
8. Claiming that all Latinx/Hispanics are racist.
9. Other anti-Latinx/Hispanic/Mexican stereotypes (name in comments).

not biased according to the definition but denies that there is bias against Asians.

# Anti-Muslim Bias

Anti-Muslim bias is a certain perception of Muslim people, which may be expressed as hatred toward Muslims. Rhetorical and physical manifestations of anti-Muslim bias are directed toward Muslim or perceived Muslim individuals and/or their property or toward Muslim community institutions and religious facilities. Contemporary examples of anti-Muslim bias in public life, the media, schools, the workplace, and in the religious sphere could, taking into account the overall context, include, but are not limited to the examples below.

This tweet is anti-Muslim because one of these paragraphs applies (choose what fits best)

1. Hatred against Muslims (e.g., slur)
2. Justifying harming of Muslims (e.g., calling for deportation of all Muslims)
3. Blaming all Muslims for terrorism and violence (e.g., blaming all Muslims for Islamist terror groups or associating all Muslim men with gang rape).
4. Blaming Islam for Islamist/Jihadist terrorism and violence.
5. Accusing the Muslims of aiming to destroy the West or non-Muslim societies (e.g. "Muslim invaders" for immigrants)
6. Stereotypical allegations about Muslims (e.g., dirty, too many children).
7. Accusing all Muslims to oppress women.
8. Accusing Muslim men to have sex with animals, such as camels or goats.
9. Other anti-Muslim stereotypes (name in comments).

not biased according to the definition but denies that there is bias against Muslims.