Tweeting Left, Right & Center:

How users and attention are distributed across Twitter

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Background: Social media as political soapbox

- Social media have long hosted diverse political conversations
- But the ideological makeup of these discussions may not be balanced
- Key questions:
  - What is the ideological distribution of American Twitter users?
  - How do users of differing ideologies behave differently?

Methods 1: Data

Dataset	Count	Timeframe	Details
Baseline	1,000	Mar 11 – 18, 2019	Randomly sampled American Twitter users
News	25,893,747	Nov 6, 2016 – June 6, 2018	**Replies to:** @cnn, @foxnews, @nytimes, @washingtonpost, @yahoonews
Issue	60,735,013	Jan 1, 2017 – Dec 31, 2017	**Keywords:** "hurricane," "north korea," "shooter," "sexual harassment," "Russia AND investigation," "white AND nationalist"

Methods 2: Ideology detection

- Basic assumption: birds of a feather…
- I.e., the more left-wing users you follow, the more left you are and vice versa
- Start with a list of widely-followed influencers with known ideology
- Use to generate ideology scores of any user
  - Less than 0 = left
  - Greater than 0 = right
- See Barbera 2015 for more details on the method

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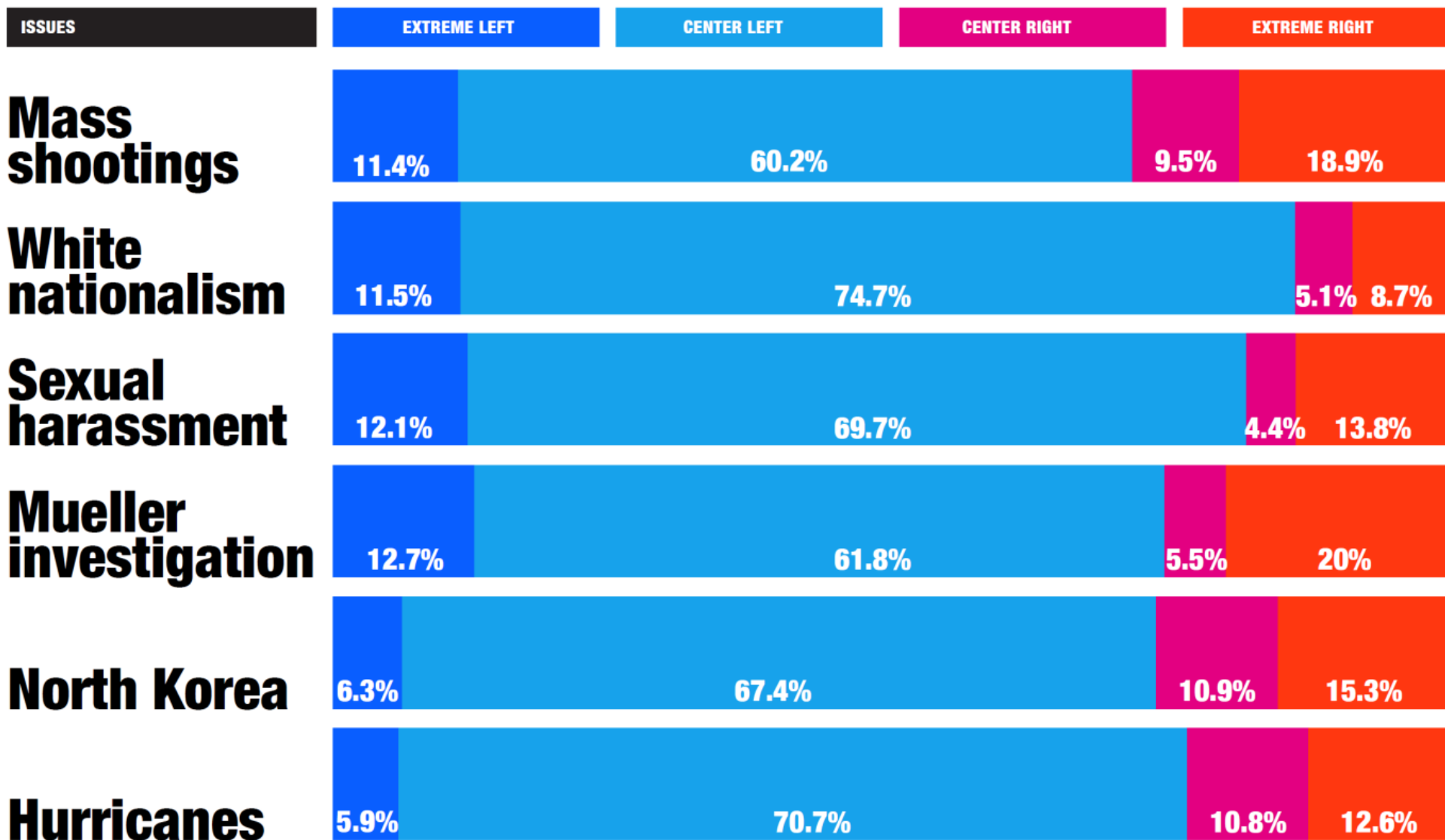
Methods 3: Ideology categorization

- Four ideology categories:
  - Far/extreme left (less than -1)
  - Center left (-1 to 0)
  - Center right (0 to 1)
  - Far right (greater than 1)

Sample influencers and their ideology scores

Screen name	Description	Ideology score	Segment
@MomsDemand	Moms Demand Action (gun control advocacy group)	-1.66	EXTREME LEFT
@repjohnlewis	John Lewis (D-GA, House representative for GA's 5th district and civil rights leader)	-1.44	EXTREME LEFT
@LeoDiCaprio	Leonardo DiCaprio (actor and environmental activist)	-0.87	CENTER LEFT
@sen_joemanchin	Joe Manchin (D-WV, senior senator of West Virginia, known for his bipartisanship)	-0.26	CENTER LEFT
@sendeanheller	Dean Heller (R-NV, former senator from Nevada, a moderate who initially repudiated President Trump and later embraced him)	0.31	CENTER RIGHT
@FoxNews	Fox News Channel (conservative-leaning US cable news network)	0.76	CENTER RIGHT
@Heritage	The Heritage Foundation (conservative think tank)	1.17	EXTREME RIGHT
@WayneDupreeShow	Wayne Dupree (conservative radio show host and USAF veteran)	1.58	EXTREME RIGHT

Finding cluster 1

- Center left dominates across baseline and issues, less so for news
- The far left and center right are tiny (usually around or below 10%)
- Far right is best represented among respondents to Fox News

ISSUES	EXTREME LEFT	CENTER LEFT	CENTER RIGHT	EXTREME RIGHT
Mass shootings	11.4%	60.2%	9.5%	18.9%
White nationalism	11.5%	74.7%	5.1%	8.7%
Sexual harassment	12.1%	69.7%	4.4%	13.8%
Mueller investigation	12.7%	61.8%	5.5%	20%
North Korea	6.3%	67.4%	10.9%	15.3%
Hurricanes	5.9%	70.7%	10.8%	12.6%

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NEWS OUTLET	EXTREME LEFT	CENTER LEFT	CENTER RIGHT	EXTREME RIGHT

New York Times — 9.4% | 58.4% | 11.2% | 20.9%

Washington Post — 8.2% | 61.2% | 13.9% | 16.6%

CNN — 5.1% | 47.9% | 12% | 35%

Yahoo! News — 4.9% | 49% | 13.8% | 32.4%

Fox News — 1.9% | 34.9% | 12.5% | 50.5%

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Finding cluster 2

- For the issues, the center left is overrepresented relative to baseline (6/6 issues) and the far right is underrepped (6/6)

- For the news outlets, the far right is generally overrepresented relative to baseline (3/5 outlets) while the far left is underrepped (3/5)

Deviation from baseline, issues

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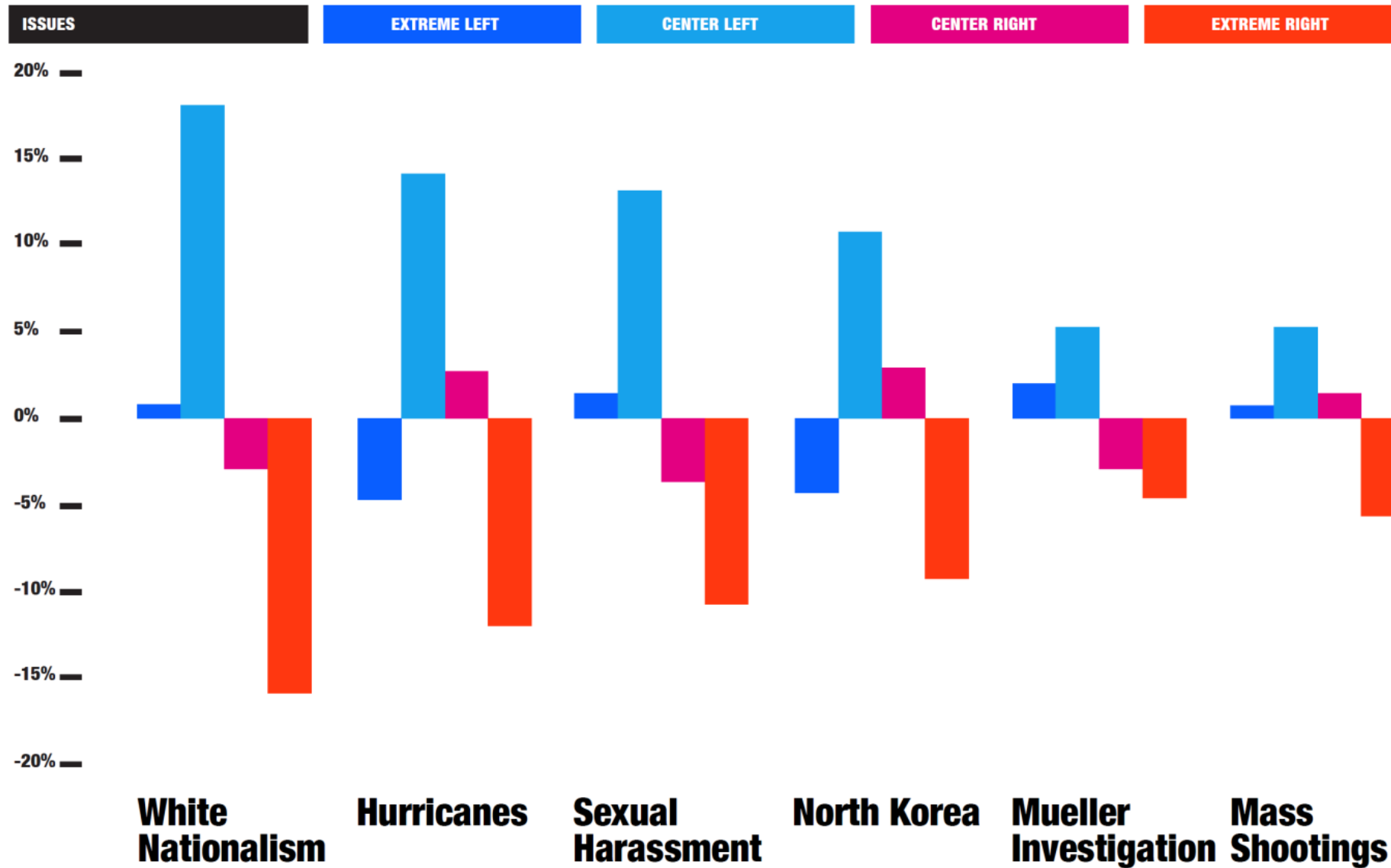
Deviation from baseline, news

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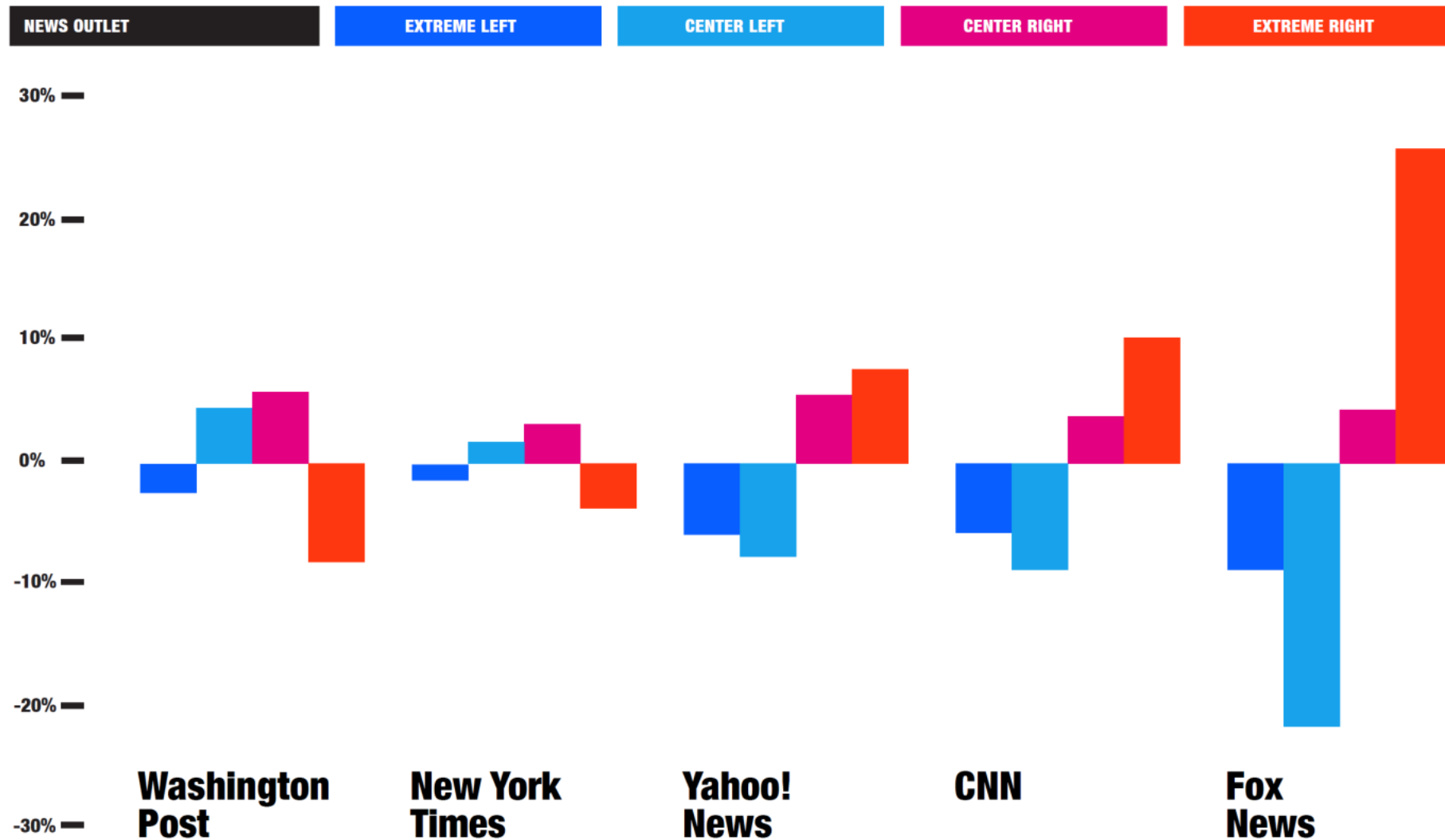
Finding cluster 3

- The extremes are more interested in punditry (new and traditional)
- The center is more interested in traditional news content

Top 10 most popular mentions by segment
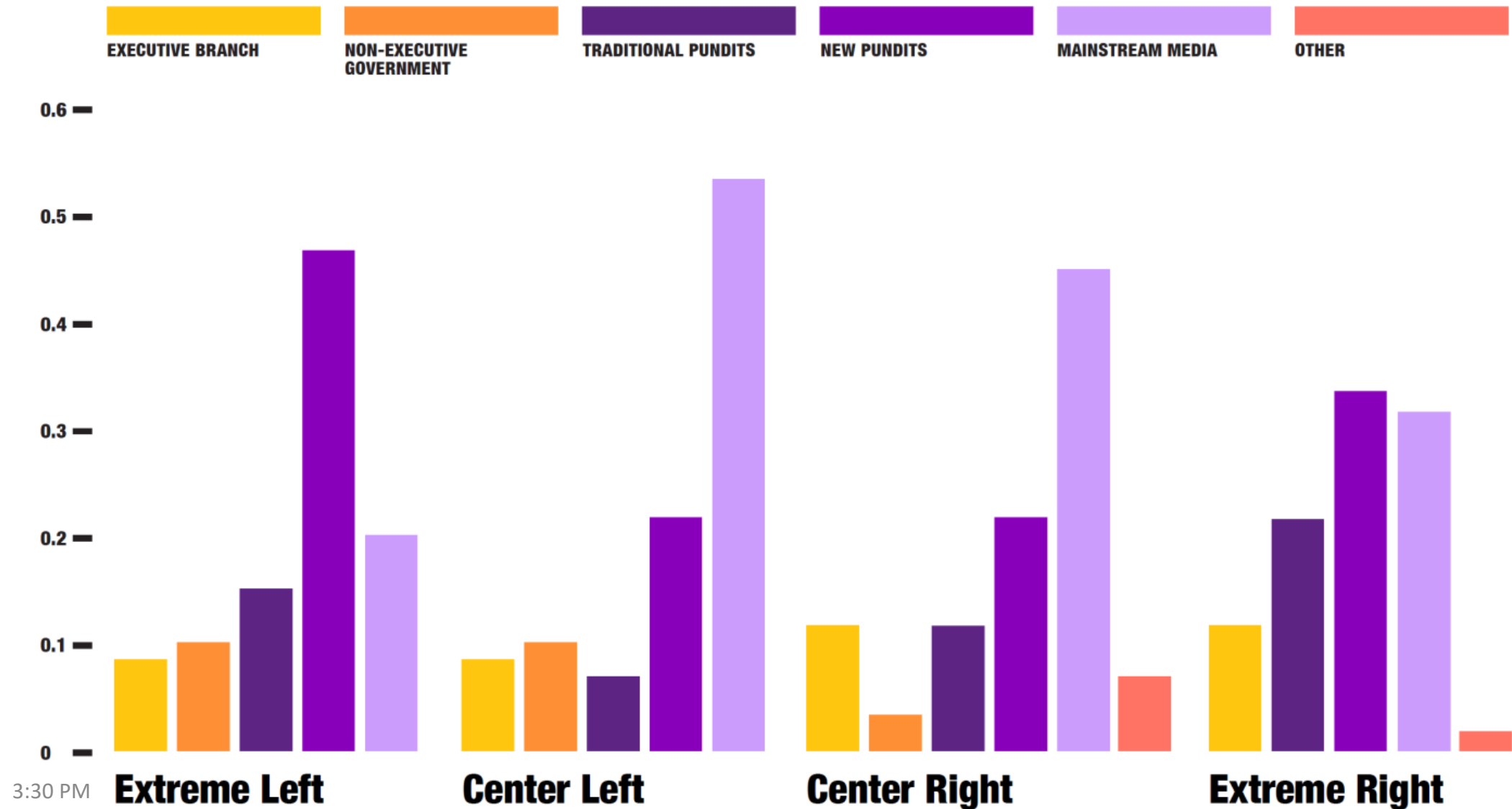
Methods 4: Content analysis

- Used to detect tone of reactions to news outlets
- Four raters read each of 5000 sampled tweets (1000 per outlet) looking for:
  - Praise
  - Substantive critique
  - Insults
- Tweets had to get at least 3 out of 4 agreements to be rated as containing each reaction
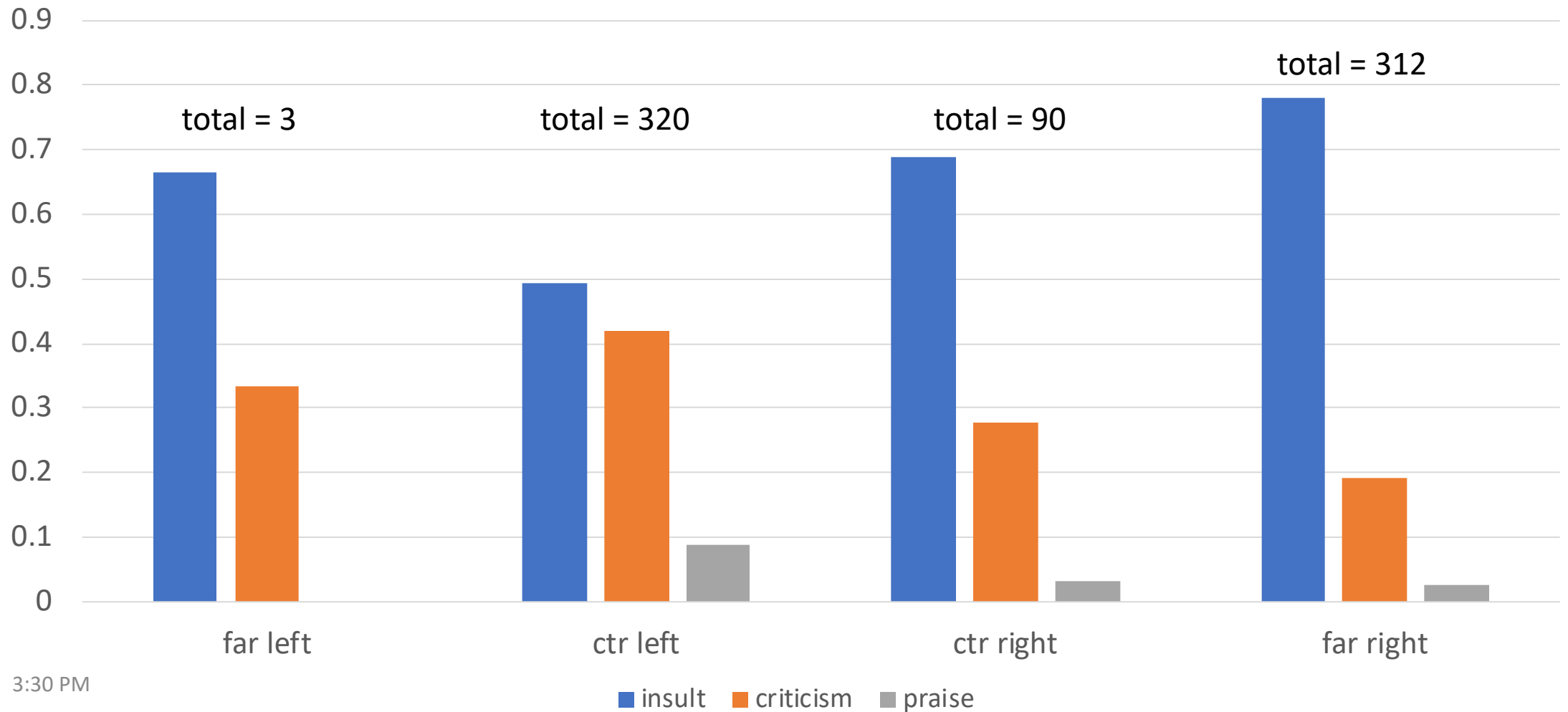
Finding cluster 4

- Insulting was the most common reaction
- Then substantive criticism
- Followed by praise, which was almost nonexistent
- Minor deviations by news outlet

NEW YORK TIMES   WASHINGTON POST   CNN   YAHOO NEWS   FOX NEWS

0.6
0.5
0.4
0.3
0.2
0.1
0

Praise   **Criticism**   **Insult**

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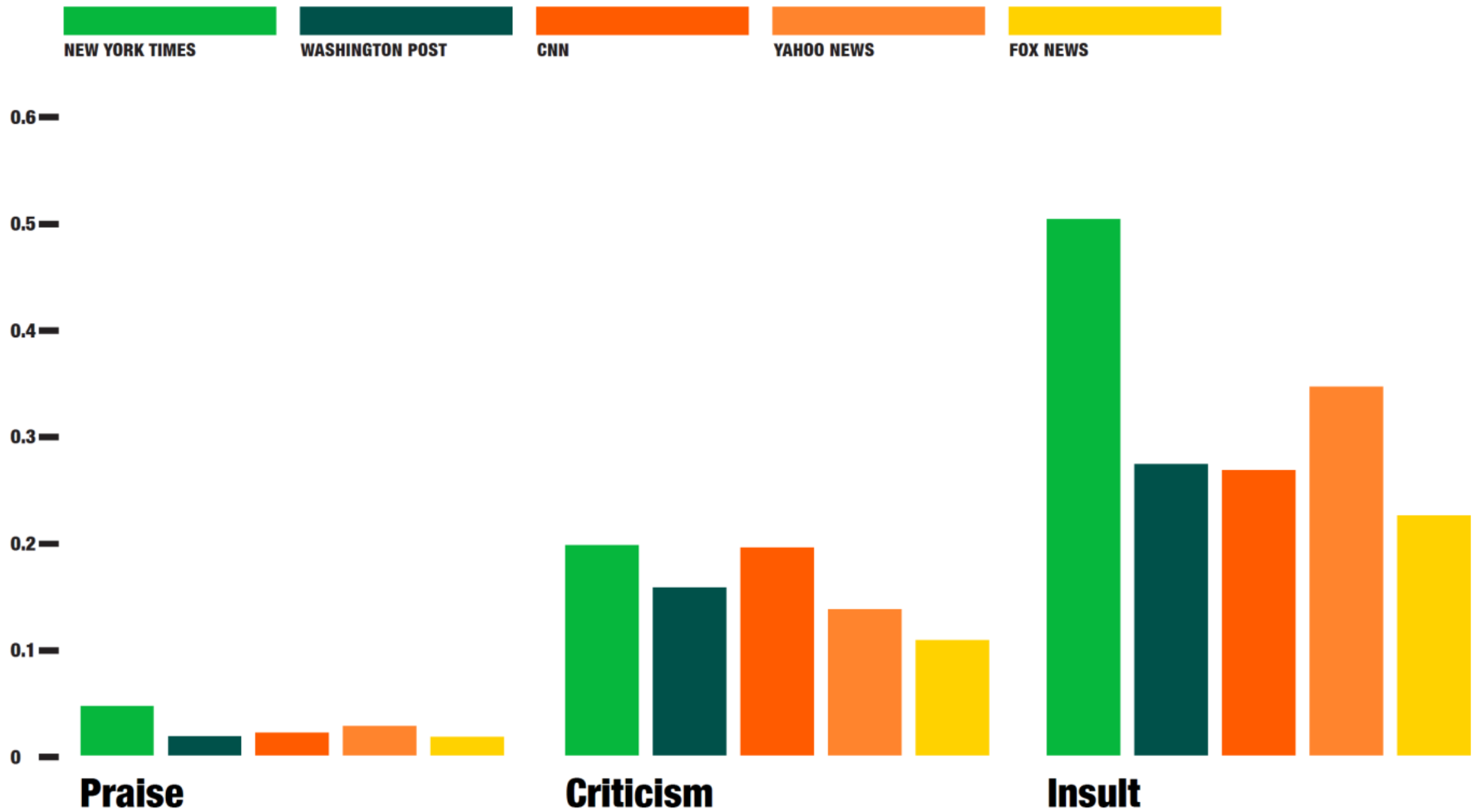
Finding cluster 5

- The center left was most likely to praise and criticize, and least likely to insult.

- The far right was most likely to insult and second least likely to praise.

- Only three far left tweets across all outlets were rated as having any of the three reactions, none of which were praise.
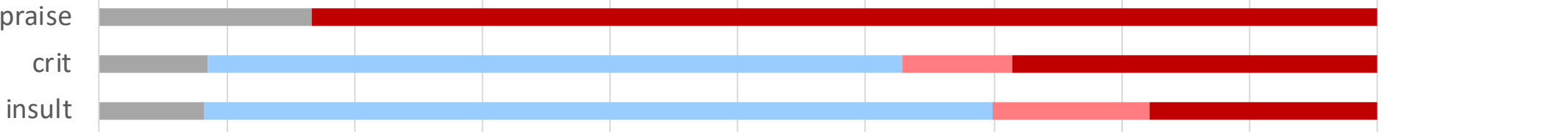
Reactions by ideology

Finding cluster 6

- Most of four of the five outlets' praise came from the center left
- Most of Fox's praise came from the far right
- The far right provided more insults to all outlets except Fox
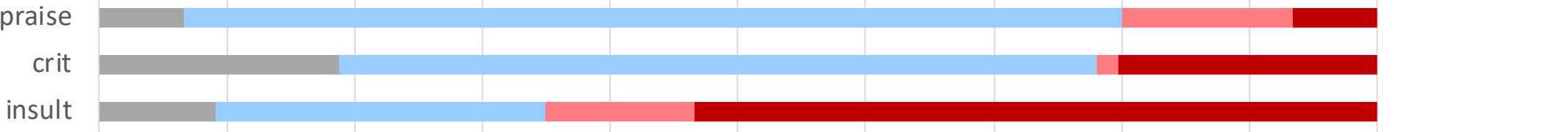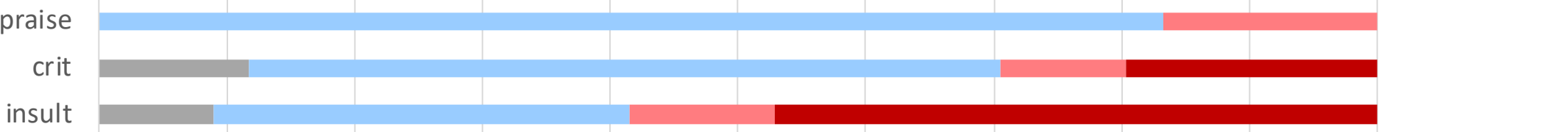- But it was also the second most insulting of Fox after the center left
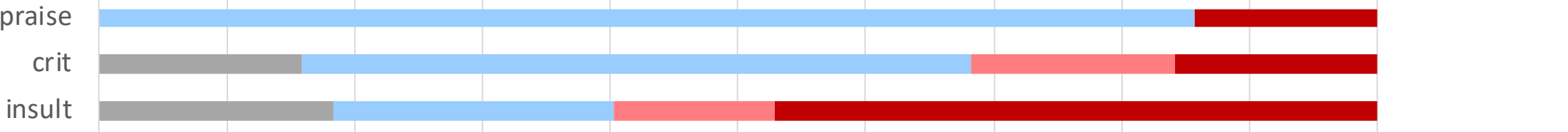
Conclusions and lingering questions 1

- Since the Trump administration, Twitter has leaned left. Why?
- The far right is much larger than the far left. Why?
- The center left is much bigger than the center right. Why?
- There seems to be one more or less unified left, but the center right and far right differ greatly from one another. Why?

Thanks!

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Conclusions and lingering questions 2

To what extent are these findings artifacts of our current political moment vs. an enduring aspect of Twitter (and possibly other social media services)?