

Title: Misinformation-related topic mentions in detail appendix for “Lies and presidential debates: How political misinformation spread across media streams during the 2020 election”

Authors: Jaren Haber (1), Lisa Singh (1,2), Ceren Budak (3,4), Josh Pasek (5), Meena Balan (1), Ryan Callahan (1), Rob Churchill (2), Brandon Herren (1), Kornraphop Kawintiranon (2)

Date: December 17th, 2021

Note: The material contained herein is supplementary to the article named in the title and published in the Harvard Kennedy School (HKS) Misinformation Review.

Appendix B: Misinformation-related topic mentions in detail

Table 1. Misinformation-related topic frequencies (and proportions) at mention level across media streams and surveys.

Misinformation-related topic	Newspapers	Television	Trump Twitter	Biden Twitter	Trump surveys	Biden surveys
<i>Biden personal attacks</i>	11,601 (27.7%)	19,996 (19.5%)	254,387 (18.5%)	2,011,037 (76.5%)	54 (13.2%)	323 (82.2%)
<i>Campaigning</i>	2,334 (5.6%)	3,544 (3.5%)	93,141 (6.8%)	9,839 (0.4%)	2 (0.5%)	0 (0%)
<i>Climate</i>	3,725 (8.9%)	5,840 (5.7%)	21,423 (1.6%)	89,580 (3.4%)	1 (0.2%)	14 (3.6%)
<i>Courts</i>	8 (0%)	0 (0%)	130 (0%)	3 (0%)	0 (0%)	0 (0%)
<i>Covid-19</i>	2,340 (5.6%)	11,619 (11.3%)	63,049 (4.6%)	44,260 (1.7%)	4 (1%)	7 (1.8%)
<i>Economy</i>	742 (1.8%)	3,709 (3.6%)	51,145 (3.7%)	39,544 (1.5%)	0 (0%)	0 (0%)
<i>Election integrity</i>	14,229 (34%)	33,500 (32.7%)	548,941 (40%)	204,937 (7.8%)	314 (76.6%)	23 (5.9%)
<i>Foreign relations</i>	0 (0%)	0 (0%)	2 (0%)	0 (0%)	0 (0%)	0 (0%)
<i>Healthcare</i>	587 (1.4%)	6,159 (6%)	11,211 (0.8%)	4,444 (0.2%)	1 (0.2%)	1 (0.3%)
<i>Immigration</i>	0 (0%)	0 (0%)	30 (0%)	5 (0%)	0 (0%)	0 (0%)
<i>Law enforcement</i>	372 (0.9%)	703 (0.7%)	11,201 (0.8%)	22,694 (0.9%)	3 (0.7%)	13 (3.3%)
<i>Military</i>	1,529 (3.7%)	745 (0.7%)	28,590 (2.1%)	110,035 (4.2%)	0 (0%)	3 (0.8%)
<i>Racism</i>	1,015 (2.4%)	5,140 (5%)	63,082 (4.6%)	65,024 (2.5%)	18 (4.4%)	9 (2.3%)
<i>Taxes</i>	3,360 (8%)	11,641 (11.3%)	226,794 (16.5%)	28,144 (1.1%)	13 (3.2%)	0 (0%)
Number of	41,842	102,596	1,373,126	2,629,546	410	393

misinformation mentions ¹	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)
Number of units	186,551	4,126,137	92,593,686	52,715,854	11,638	11,055
Misinformation mentions/unit ²	22.4%	2.49%	1.37%	4.99%	3.52%	3.55%

¹ While “Number of misinformation mentions” refers to all mentions of any misinformation-related topic in a given stream, “Number of units” indicates the overall number of articles, segments, tweets, or surveys in that stream (i.e., all information, not just misinformation).

² This indicates the ratio of misinformation to information—that is, the number of mentions of misinformation divided by the number of units of information (articles, segments, tweets, or surveys). Mentions are aggregated by topic rather than by article, so a given article may contribute to multiple topics and thus be counted more than once.

Table 2. Frequencies (and proportions) for all misinformation-related topics before and after debates across media streams and surveys.

Misinformation-related topic and date range	Newspapers	Television	Trump Twitter	Biden Twitter	Trump surveys	Biden surveys
<i>Biden personal attacks</i>						
Pre-debate ³	2,288 (12.7%)	4,196 (8.6%)	88,863 (9.3%)	569,084 (62.1%)	19 (6.6%)	38 (50.7%)
Post-debate 1	5,743 (37.4%)	9,736 (29.6%)	57,929 (36.9%)	639,625 (86.4%)	11 (29.7%)	124 (93.2%)
Post-debate 2	3,570 (42.5%)	6,064 (28.6%)	107,595 (40.6%)	802,328 (82.4%)	24 (28.6%)	161 (87.0%)
<i>Campaigning</i>						
Pre-debate	1,723 (9.5%)	2,983 (6.1%)	89,341 (9.4%)	8,155 (0.9%)	2 (0.7%)	0 (0%)
Post-debate 1	470 (3.1%)	477 (1.5%)	2,131 (1.4%)	1,057 (0.1%)	0 (0%)	0 (0%)
Post-debate 2	141 (1.7%)	84 (0.4%)	1,669 (0.6%)	627 (0.1%)	0 (0%)	0 (0%)
<i>Climate</i>						
Pre-debate	1,744 (9.7%)	3,532 (7.3%)	15,161 (1.6%)	46,268 (5.1%)	1 (0.3%)	5 (6.7%)
Post-debate 1	800 (5.2%)	1,182 (3.6%)	1,762 (1.1%)	6,600 (0.9%)	0 (0%)	4 (3%)
Post-debate 2	1,181 (14.1%)	1,126 (5.3%)	4,500 (1.7%)	36,712 (3.8%)	0 (0%)	5 (2.7%)
<i>Courts</i>						
Pre-debate	0 (0%)	0 (0%)	12 (0%)	0 (0%)	0 (0%)	0 (0%)
Post-debate 1	8 (0.1%)	0 (0%)	115 (0.1%)	1 (0%)	0 (0%)	0 (0%)
Post-debate 2	0 (0%)	0 (0%)	3 (0%)	2 (0%)	0 (0%)	0 (0%)
<i>Covid-19</i>						
Pre-debate	1,057 (5.8%)	5,026 (10.4%)	26,901 (2.8%)	26,764 (2.9%)	2 (0.7%)	5 (6.7%)
Post-debate 1	912 (5.9%)	4,391 (13.4%)	5,486 (3.5%)	7,759 (1%)	0 (0%)	2 (1.5%)
Post-debate 2	371 (4.4%)	2,202 (10.4%)	30,662 (11.6%)	9,737 (1%)	2 (2.4%)	0 (0%)
<i>Economy</i>						
Pre-debate	471 (2.6%)	2,014 (4.2%)	24,865 (2.6%)	32,592 (3.6%)	0 (0%)	0 (0%)
Post-debate 1	191 (1.2%)	991 (3%)	6,325 (4%)	2,709 (0.4%)	0 (0%)	0 (0%)

³ As in Figure 2, “pre-debate” here captures conversation before either debate took place (August 1–September 28), “post-debate 1” focuses on media content during and after debate 1 (September 29–October 21), and “post-debate 2” is limited to debate 2 and its aftermath (October 22–November 3; all these dates inclusive).

Post-debate 2	80 (1%)	704 (3.3%)	19,955 (7.5%)	4,243 (0.4%)	0 (0%)	0 (0%)
<i>Election integrity</i>						
Pre-debate	7,619 (42.2%)	21,499 (44.3%)	24,865 (2.6%)	91,031 (9.9%)	250 (86.5%)	9 (12%)
Post-debate 1	4,741 (30.8%)	8,232 (25.1%)	6,325 (4%)	34,894 (4.7%)	13 (35.1%)	0 (0%)
Post-debate 2	1,869 (22.3%)	3,769 (17.8%)	19,955 (7.5%)	79,012 (8.1%)	51 (60.7%)	14 (7.6%)
<i>Foreign relations</i>						
Pre-debate	0 (0%)	0 (0%)	2 (0%)	0 (0%)	0 (0%)	0 (0%)
Post-debate 1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Post-debate 2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<i>Healthcare</i>						
Pre-debate	309 (1.7%)	1,544 (3.2%)	6,827 (0.7%)	2,687 (0.3%)	1 (0.3%)	0 (0%)
Post-debate 1	204 (1.3%)	1,790 (5.4%)	3,090 (2%)	192 (0%)	0 (0%)	0 (0%)
Post-debate 2	74 (0.9%)	2,825 (13.3%)	1,294 (0.5%)	1,565 (0.2%)	0 (0%)	1 (0.5%)
<i>Immigration</i>						
Pre-debate	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Post-debate 1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Post-debate 2	0 (0%)	0 (0%)	30 (0%)	5 (0%)	0 (0%)	0 (0%)
<i>Law enforcement</i>						
Pre-debate	258 (1.4%)	595 (1.2%)	10,612 (1.1%)	21,332 (2.3%)	2 (0.7%)	10 (13.3%)
Post-debate 1	102 (0.7%)	105 (0.3%)	321 (0.2%)	926 (0.1%)	0 (0%)	0 (0%)
Post-debate 2	12 (0.1%)	3 (0%)	268 (0.1%)	436 (0%)	1 (1.2%)	3 (1.6%)
<i>Military</i>						
Pre-debate	909 (5%)	436 (0.9%)	23,188 (2.4%)	80,798 (8.8%)	0 (0%)	2 (2.7%)
Post-debate 1	429 (2.8%)	227 (0.7%)	2,387 (1.5%)	25,270 (3.4%)	0 (0%)	1 (0.8%)
Post-debate 2	191 (2.3%)	82 (0.4%)	3,015 (1.1%)	3,967 (0.4%)	0 (0%)	0 (0%)
<i>Racism</i>						
Pre-debate	314 (1.7%)	541 (1.1%)	30,566 (3.2%)	22,747 (2.5%)	11 (3.8%)	6 (8%)
Post-debate 1	149 (1%)	962 (2.9%)	7,308 (4.6%)	9,436 (1.3%)	2 (5.4%)	2 (1.5%)
Post-debate 2	552 (6.6%)	3,637 (17.1%)	25,208 (9.5%)	32,841 (3.4%)	5 (6%)	1 (0.5%)

<i>Taxes</i>						
Pre-debate	1,378 (7.6%)	6,158 (12.7%)	171,785 (18.1%)	14,656 (1.6%)	1 (0.3%)	0 (0%)
Post-debate 1	1,624 (10.6%)	4,768 (14.5%)	37,132 (23.6%)	11,499 (1.6%)	11 (29.7%)	0 (0%)
Post-debate 2	358 (4.3%)	715 (3.4%)	17,877 (6.8%)	1989 (0.2%)	1 (1.2%)	0 (0%)