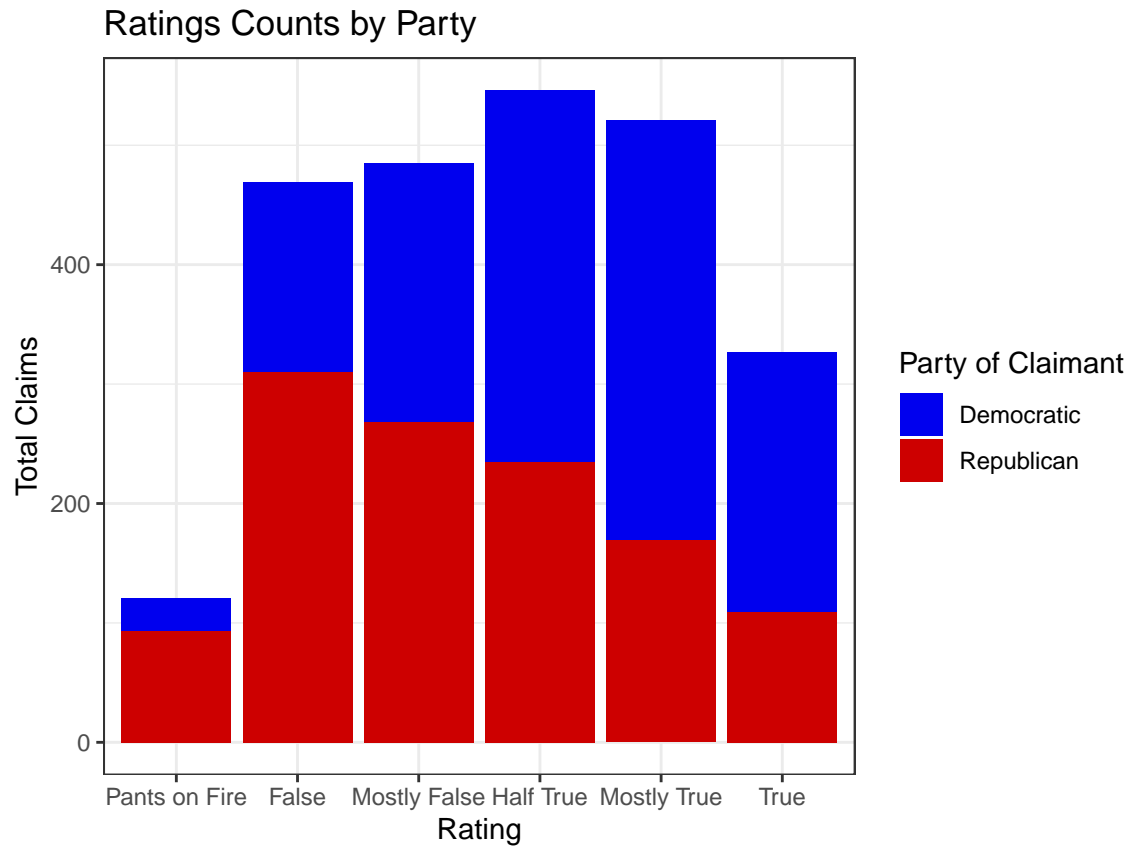# PolitiFact Analysis

Having cleaning, sorted, and tagged all of our data, we conducted some initial data analysis to answer some of our research questions.

Which Party Lies More?

Our first research question was relatively simple. Which party lies more? While it is an impossible question to answer definitively, we decided to look at each rating tier and see the breakdown by party to get a sense of which party receives more false ratings.

Table 1: Claims by Party and Rating

textualRating	Democratic	Republican	Total
Pants on Fire	28	93	121
False	159	310	469
Mostly False	217	268	485
Half True	311	235	546
Mostly True	352	169	521
True	218	109	327

Ratings Counts by Party

We also viewed the data proportionally. Here we can see that Republican claimants are responsible for over 76.9% of the Pants on Fire claims, 66% of False claims, and 55.2% of Mostly False claims. Democrats have a majority of truthful claims responsible for 57% of the Half True claims, 67.6% of the Mostly True claims, and 66.7% of True claims.
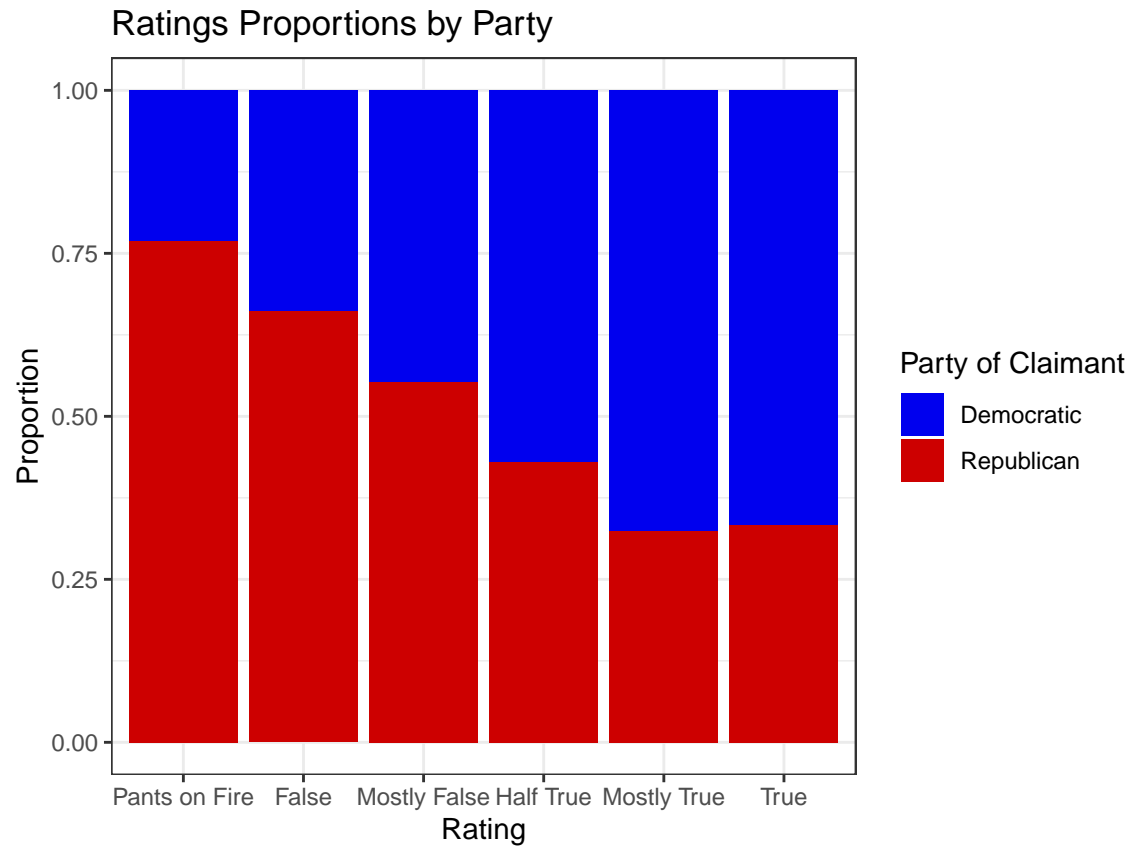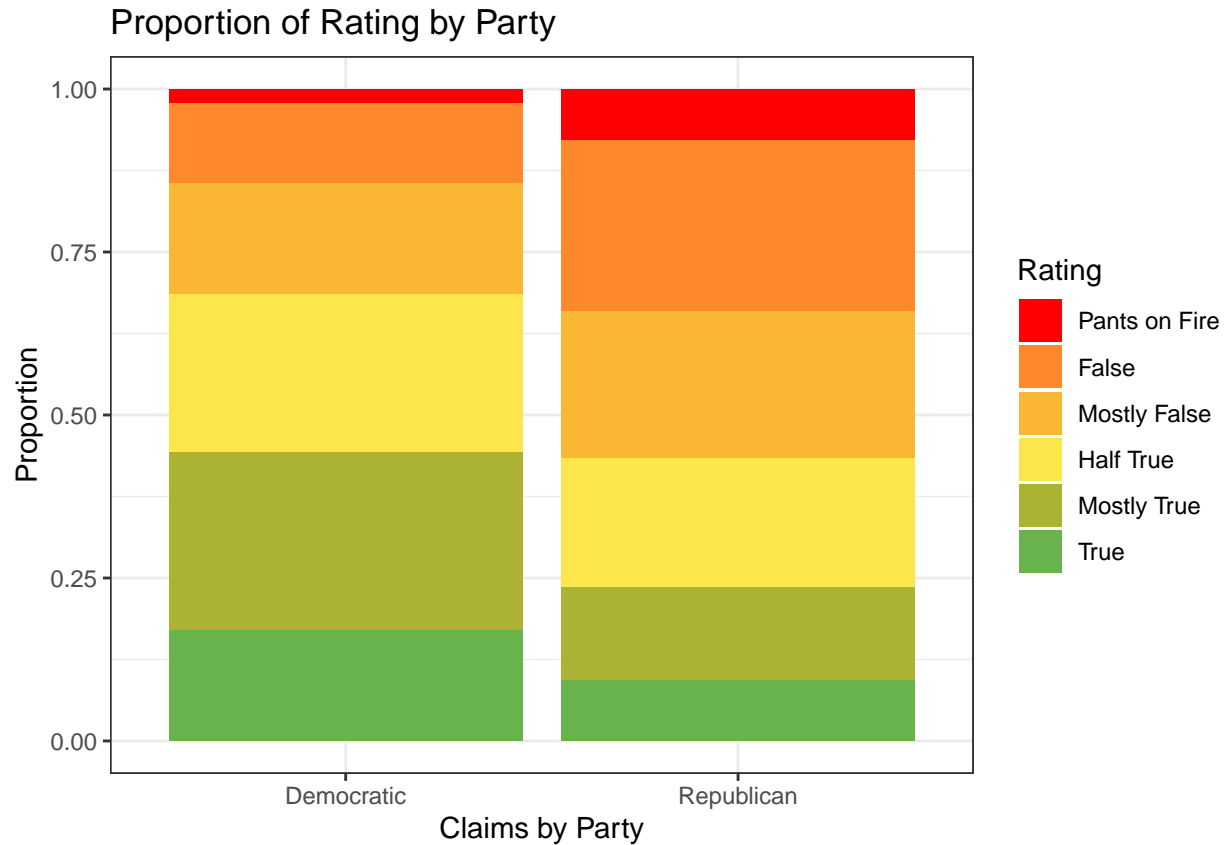
Ratings Proportions by Party

Table 2: Percentage of Claims by Textual Rating

textualRating	Democratic	Republican	Total
Pants on Fire	2.2	7.9	4.9
False	12.4	26.2	19.0
Mostly False	16.9	22.6	19.6
Half True	24.2	19.8	22.1
Mostly True	27.4	14.3	21.1
True	17.0	9.2	13.2

Severity of Claims – by Party

Our second research question was also simple: does one party lie worse? For this, we looked within each party's claims and reviewed the severity of ratings they received.

By this table, it seems that Republicans have a higher proportion of false-ish statements. Here we can see that 7.9% of all Republican claims are rated Pants on Fire as opposed to 2.2% of Democratic claims. 26.2 % and 22.6% of Republican claims are rated False and Mostly False respectively. 12.4% and 16.9% of Democratic claims are rated False and Mostly False.

Democrats also have a greater proportion of their claims rated True and Mostly True. To see a full percentage breakdown, review the table below.

Table 3: MacroTag Subject Counts and Percentages by Party

MacroTag	Democratic	Republican	TotalCount	DemocraticPercentage	RepublicanPercentage
Fear	90	208	298	22.28	31.00
Legislation	67	120	187	16.58	17.88
Self/Personal Record	63	69	132	15.59	10.28
Opponent/Opponent's Record	153	287	440	37.87	42.77

What do they Lie About?

Next we reviewed the distribution of our subject tags. A reminder: claims can be tagged with multiple tags each and only Mostly False, False, and Pants on Fire claims were tagged by subject.

Listed in our table below is the number of falsehoods tagged with each of the four macro tags, by party and in total. For each of the tags (rows) the columns show the number of Democratic claims tagged with that subject tag, the number of Republican claims tagged with that subject tag, and the total number of claims tagged with that subject tag. The third and fourth columns also shows what percentage of a given parties' falsehoods were assigned that tag. For example 17.88 % of Republican falsehoods were tagged as Legislation. 15.59 % of Democratic falsehoods were tagged as Self/Personal Record. These percentages are valuable to compare the two parties because there is a greater number of Republican False(ish) claims overall, so reviewing the proportions helps to compare across parties.

We created a similar table to review each of the 32 micro subject tags. For each of the tags (rows), the table shows the number of Democratic claims tagged with that subject tag, the number of Republican claims tagged with that subject tag, and the total number of claims tagged with that subject tag. Again the third and fourth columns show what percentage of a given parties' claims were assigned that tag. For example, 11.88 % of Democratic falsehoods were tagged as Labor and Employment compared to only 5.66% of Republican falsehoods receiving that tag.

Table 4 has an additional column called "Percent Disparity." This column is the difference between DemocraticPercentage and Republican Percentage. This is the variable used to order the table. The lower the value (negative) signifies that falsehoods about that subject make up a greater proportion of Democrat lies than Republicans. The greater the value in Percent Disparity means that falsehoods about that subject make up a greater proportion of Republican lies than Democrats, allowing us to see where the parties diverge in subject.

Democrats are more likely than Republicans to have their falsehoods be about Labor and Employment, Economic Well-Being and Domestic Commerce, Education, Guns and Race.

Republicans on the other hand are more likely than Democrats to tell falsehoods that focus on Immigration and Refugee Issues, Law Crime and Policing, Voting/Elections, International Affairs and Foreign Aid, Environment, and History.
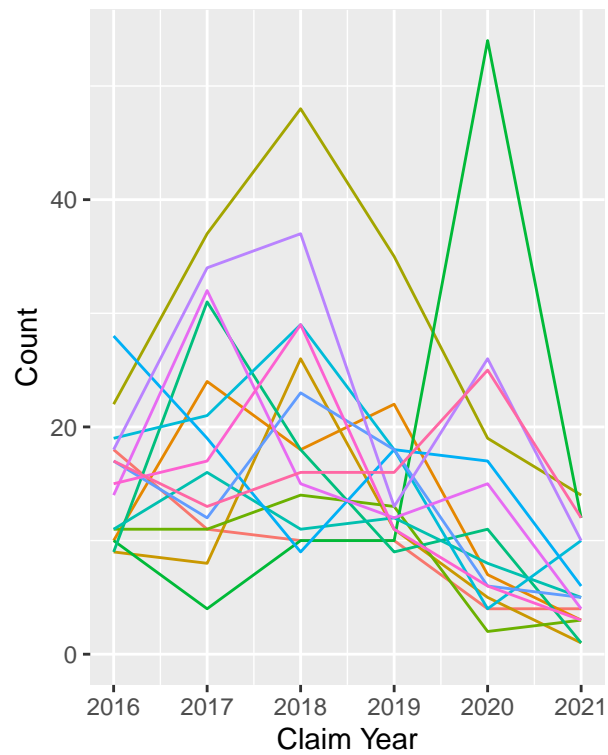
Table 4: Microtag Subject Counts and Percentages by Party

MicroTag	Democratic	Republican	TotalCount	DemocraticPercentage	RepublicanPercentage	PercentDisparity
Labor and Employment	48	38	86	11.88	5.66	-6.22
Economic Well-Being and Domestic Commerce	48	41	89	11.88	6.11	-5.77
Education	33	28	61	8.17	4.17	-4.00
Guns	31	25	56	7.67	3.73	-3.95
Race	20	13	33	4.95	1.94	-3.01
Taxes	38	47	85	9.41	7.00	-2.40
Foreign Trade	13	9	22	3.22	1.34	-1.88
Health (non-care)	43	59	102	10.64	8.79	-1.85
Record/Candidate Biography/ Campaigns and Personal Behavior	181	295	476	44.80	43.96	-0.84
Women	10	12	22	2.48	1.79	-0.69
Agriculture	5	7	12	1.24	1.04	-0.19
Community Development and Housing	8	13	21	1.98	1.94	-0.04
Media and Communications	11	20	31	2.72	2.98	0.26
Healthcare	32	55	87	7.92	8.20	0.28
National and State Macroeconomic Issues	12	22	34	2.97	3.28	0.31
LGBTQ	4	11	15	0.99	1.64	0.65
Civil Rights, Minority Issues, and Civil Liberties	18	35	53	4.46	5.22	0.76
Transportation	6	16	22	1.49	2.38	0.90
Defense/Military	21	41	62	5.20	6.11	0.91
Technology Science Space	9	24	33	2.23	3.58	1.35
Social Welfare	34	67	101	8.42	9.99	1.57
Energy	7	23	30	1.73	3.43	1.70
Religion	2	15	17	0.50	2.24	1.74
Abortion	3	19	22	0.74	2.83	2.09
Government Operations	66	125	191	16.34	18.63	2.29
Terrorism	11	34	45	2.72	5.07	2.34
History	20	49	69	4.95	7.30	2.35
Environment	9	32	41	2.23	4.77	2.54
International_affairs and Foreign Aid	31	75	106	7.67	11.18	3.50
Voting/Elections	27	72	99	6.68	10.73	4.05
Law and Crime and Policing	40	101	141	9.90	15.05	5.15
Immigration and Refugee Issues	22	84	106	5.45	12.52	7.07

We determined the top 15 most common subject tags by count, excluding 'Record/Candidate Biography/ Campaigns and Personal Behavior'. We knew from experience that during specific time periods, certain subjects would be lied about at a disproportionate rate. For example, the spike in lies relating to Health at the ouset of the pandemic. To visualize this phenomenon, we made the following graph displaying these 15 tags and how the frequency of lies progressed over time. It is of note that we only have six months of data in 2021, which is why counts are disproportionately lower.

Top 15 Micro Subject Counts
Distribution by Year

Micro Subject Tag

- Defense/Military
- Economic Well–Being and Domestic Commerce
- Education
- Government Operations
- Guns
- Health (non–care)
- Healthcare
- History
- Immigration and Refugee Issues
- International_affairs and Foreign Aid
- Labor and Employment
- Law and Crime and Policing
- Social Welfare
- Taxes
- Voting/Elections