Location of the Lie EDA

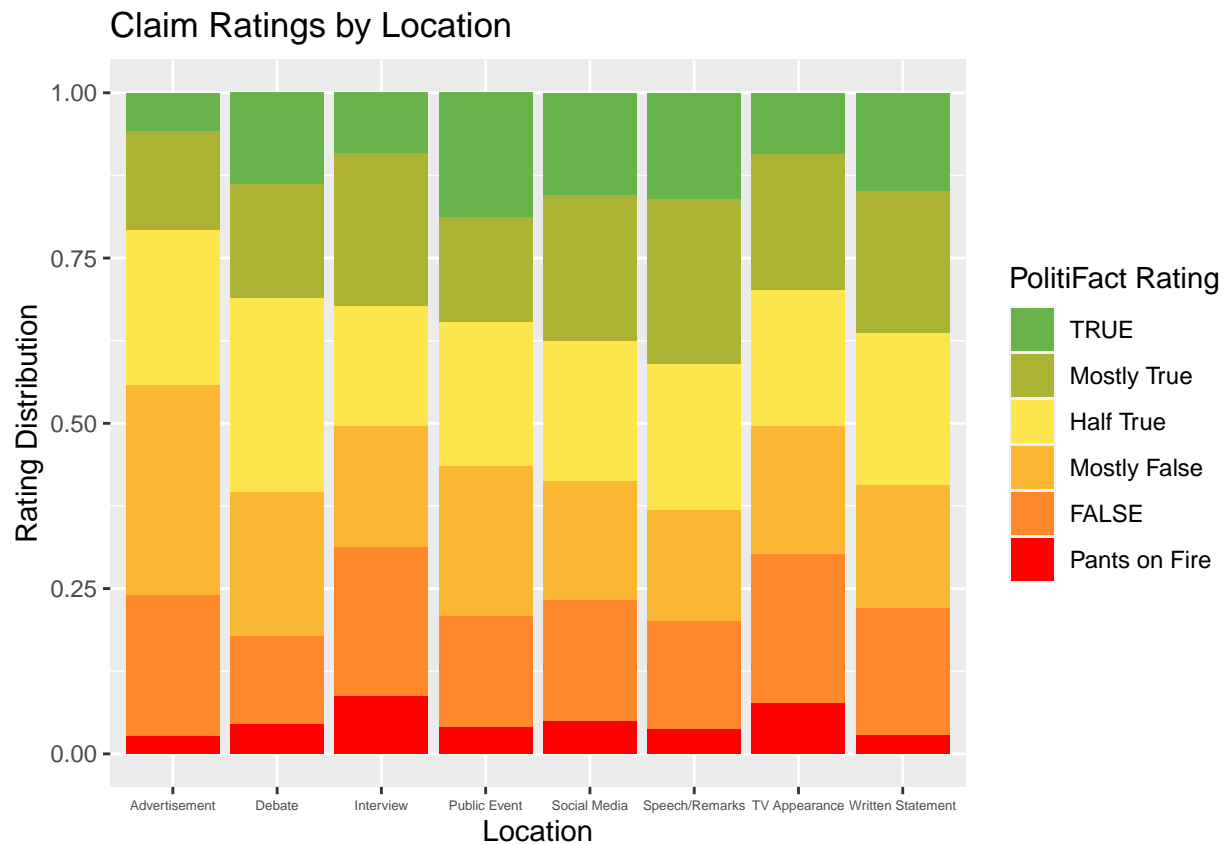## Sofia Bliss-Carrascosa

3/30/2022

Exploratory Data Analysis

Table 1: Distribution of All Claims by Location

location	count	prop
Advertisement	188	0.075
Debate	225	0.090
Interview	208	0.083
Public Event	101	0.040
Social Media	405	0.162
Speech/Remarks	620	0.248
TV Appearance	472	0.189
Written Statement	281	0.112

The three largest categories of claims, in the PolitiFact database, are `Speech/Remarks`, `TV Appearance`, and `Social Media`. The smallest categories were `Public Event`, `Advertisement`, and `Interview`.

Table 2: Proportion of Ratings by Location

location	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Advertisement	0.059	0.149	0.234	0.319	0.213	0.027
Debate	0.138	0.173	0.293	0.218	0.133	0.044
Interview	0.091	0.231	0.183	0.183	0.226	0.087
Public Event	0.188	0.158	0.218	0.228	0.168	0.040
Social Media	0.156	0.220	0.212	0.180	0.183	0.049
Speech/Remarks	0.161	0.250	0.219	0.169	0.163	0.037
TV Appearance	0.093	0.206	0.206	0.193	0.227	0.076
Written Statement	0.149	0.214	0.231	0.185	0.192	0.028

The highest proportion of True-ish (True, Mostly True, Half True) claims are made in debates (0.604). The lowest proportion of True-ish claims are made in Advertisements (0.442). The highest proportion of Pants on Fire claims appear in interviews (8.7% of claims checked). The highest proportion of True statements are made at Public Events (18.8% of claims checked).

Table 3: Claims Count by Party

claimant_party	count	prop
Democratic	1304	0.522
Republican	1196	0.478

As we know, there are approximately 100 more claims made by Democrats versus Republicans. Given the overall size of the dataset, though, I can say they are about equivalent, as Democrats have 1.09x as many claims as Republicans.
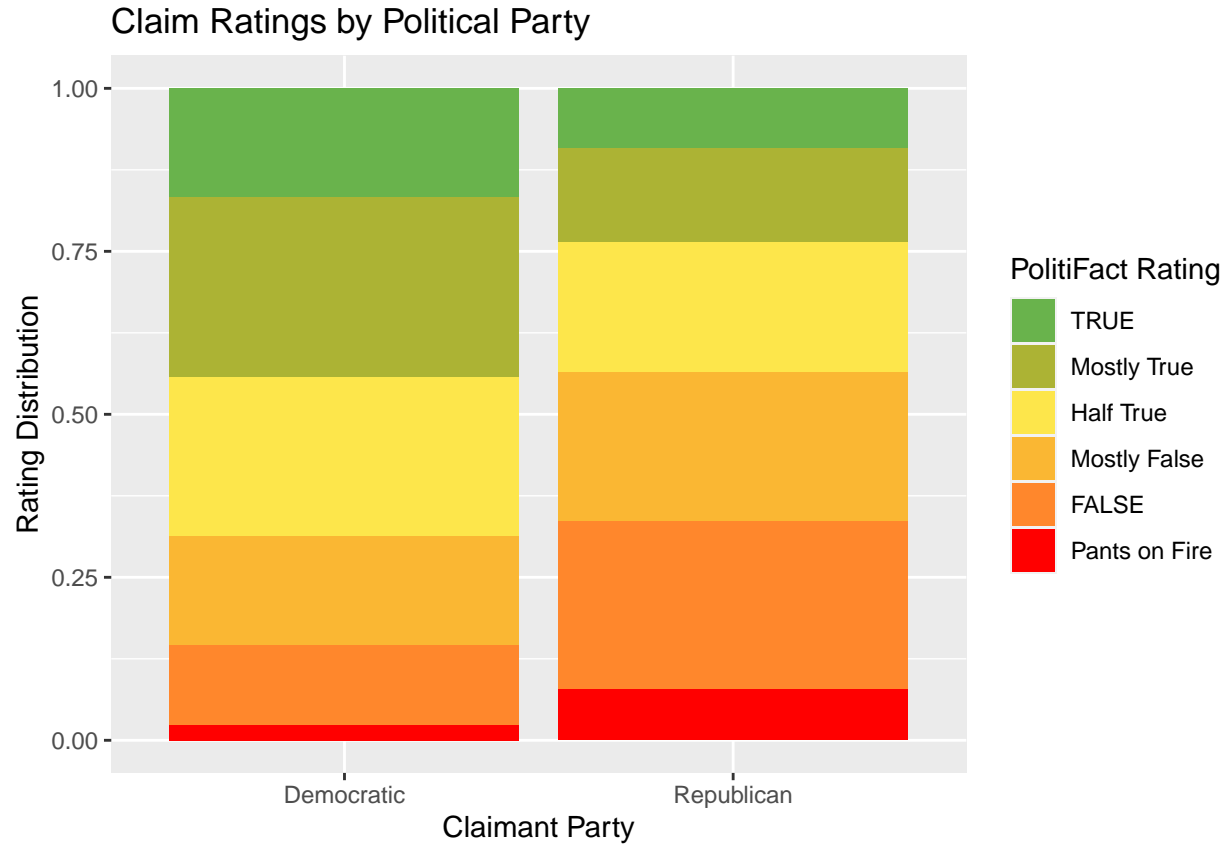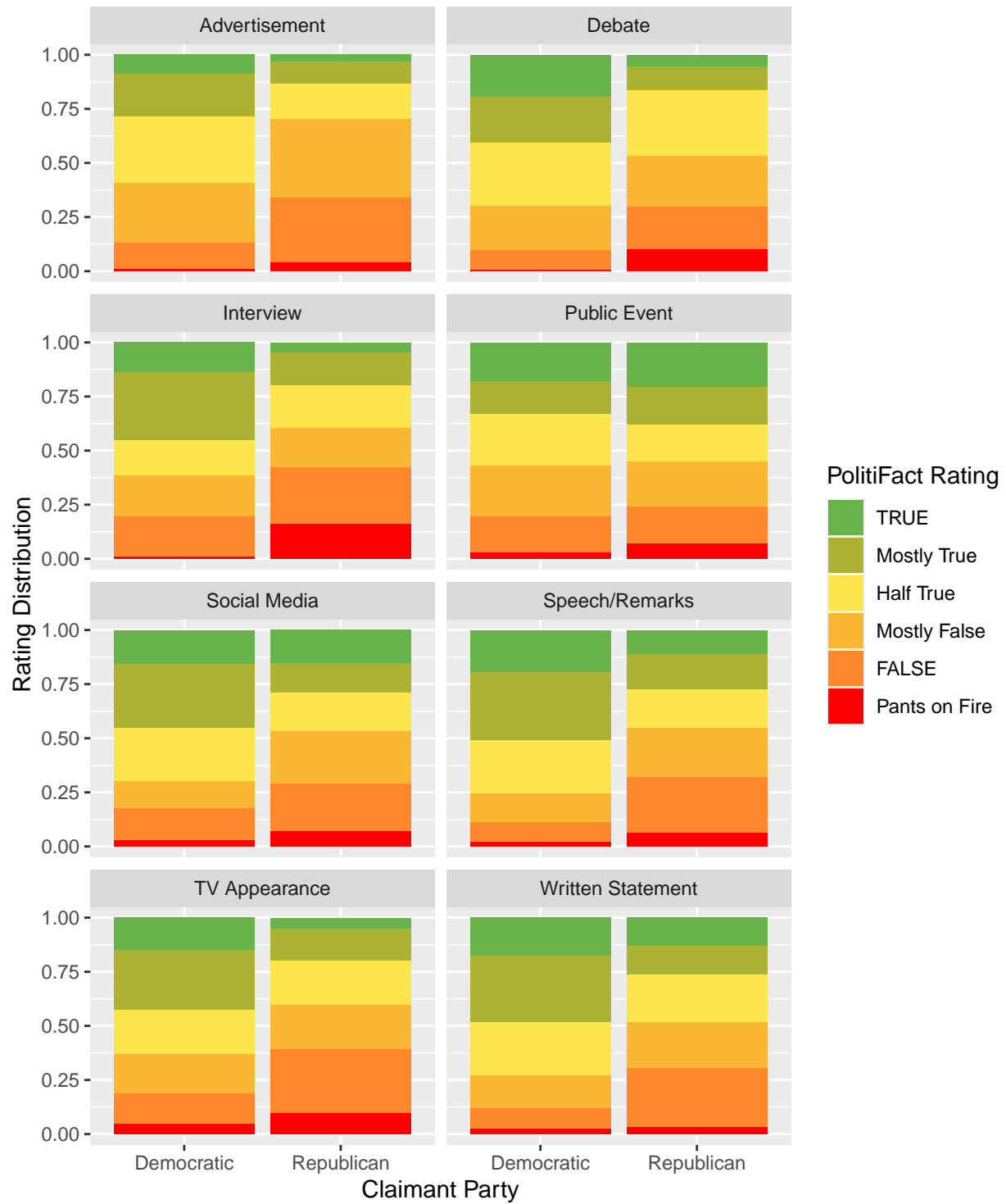
Claim Ratings by Political Party

Table 4: Distribution of Claims by Party and Location

claimant_party	Advertisement	Debate	Interview	Public Event	Social Media	Speech/Remarks	TV Appearance	Written Statement
Democratic	91	135	102	72	209	362	207	126
Republican	97	90	106	29	196	258	265	155

Claim Ratings by Political Party and Location

Social Media

Table 5: Distribution of Claims by Social Media App

location.extra	count
Facebook	62
Instagram	2
LinkedIn	1
Twitter	337
Various Platforms	1
YouTube	2

Seeing that the vast majority of claims originate on Twitter and Facebook, lets center in on those.
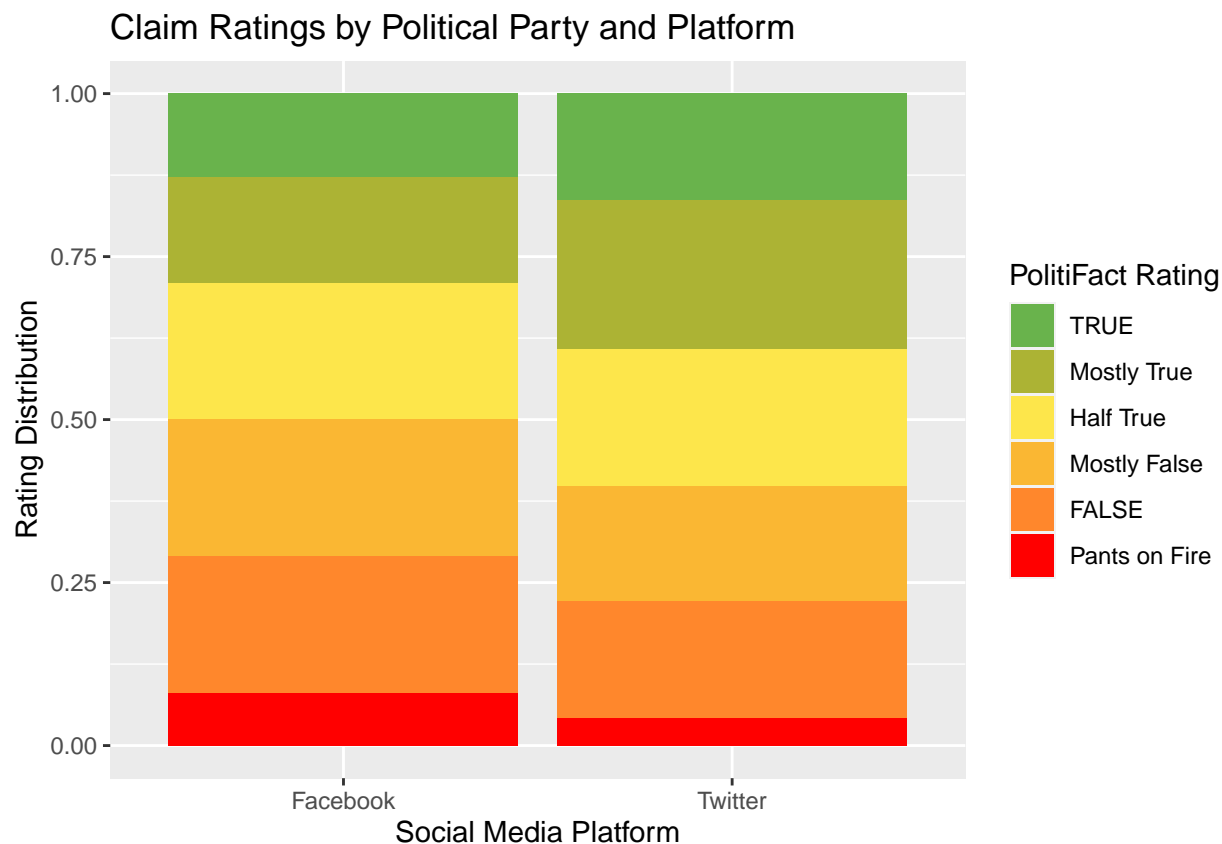

Claim Ratings by Political Party and Platform

Table 6: Proportion of Ratings by Platform

platform	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Facebook	0.129	0.161	0.210	0.210	0.210	0.081
Twitter	0.163	0.228	0.211	0.175	0.181	0.042

This data appears to indicate that Facebook has a higher proportion of falsehoods than Twitter, among all checked statements on PolitiFact. Of all statements on Facebook, 50.1% of statements were found to be Mostly False, False, or Pants on Fire, compared to 39.8% of the same on Twitter. Twitter also had a higher proportion of True statements checked, 16.3% to Facebook's 12.9%, about 1.26x higher. There are 2x as many Pants on Fire claims on Facebook when compared to Twitter.

TV Appearance

Table 7: Distribution of TV Appearances

location.extra	count
ABC	47
Bloomberg	2
CBS	35
CNBC	2
CNN	69
Comedy Central	1
Digital Platform	2
EWTN	1
FOX	92
HBO	6
MSNBC	60
NBC	73
Newsmax	1
PBS	3
Regional Station	73
TBN	1
Telemundo	1
the Hill	1
Time Warner Cable News	2

To continue analytics, we will focus on all TV channels on which at least 50 claims made. This leaves: CNN, FOX, MSNBC, NBC, and the Regional Station tag.
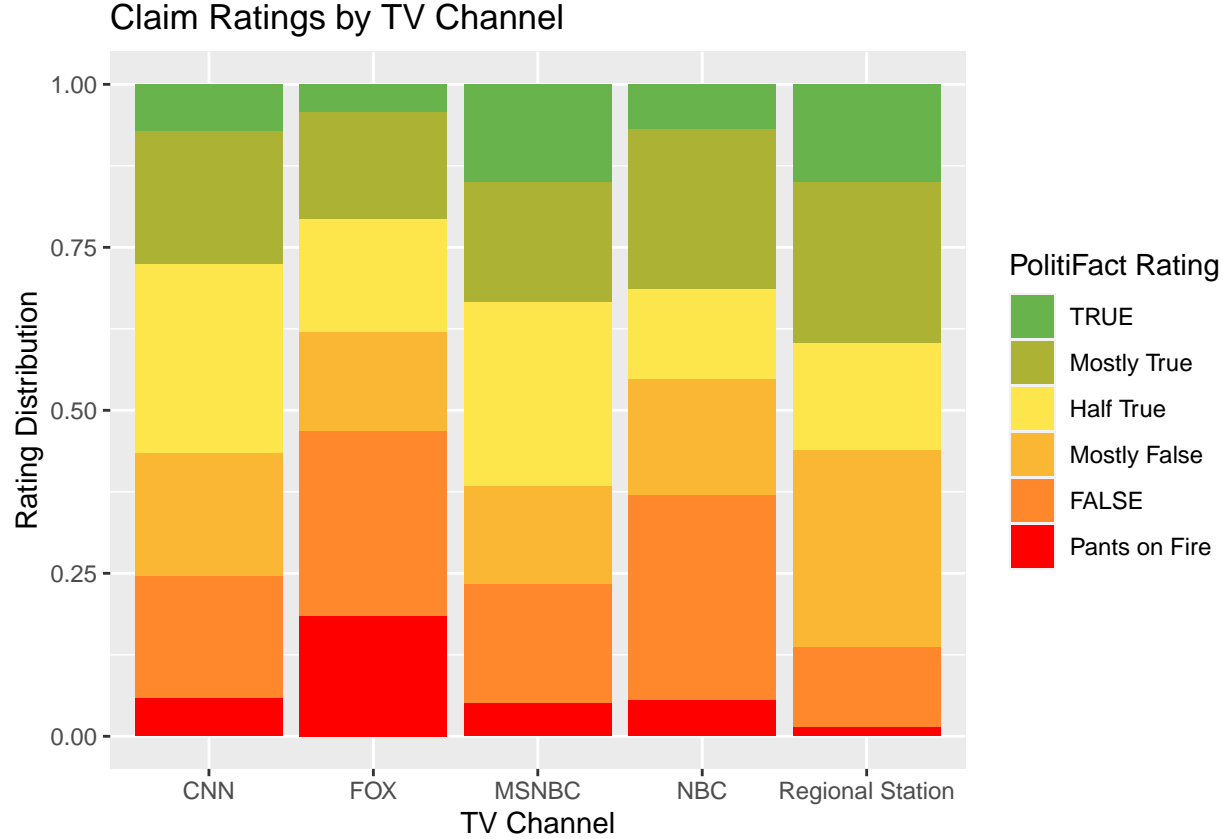
Claim Ratings by TV Channel

Table 8: Claim Rating Proportions by TV Channel

channel	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
CNN	0.072	0.203	0.290	0.188	0.188	0.058
FOX	0.043	0.163	0.174	0.152	0.283	0.185
MSNBC	0.150	0.183	0.283	0.150	0.183	0.050
NBC	0.068	0.247	0.137	0.178	0.315	0.055
Regional Station	0.151	0.247	0.164	0.301	0.123	0.014

Basing trueness on Half True, Mostly True, and True statements, the descending order of trueness by TV Channel goes as follows: MSNBC (61.6% True-ish), CNN (56.5% True-ish), Regional Stations (56.2% True-ish), NBC (45.2% True-ish), and finally FOX (38.0% True-ish).

FOX also had significantly less True statements recorded, and significantly more Pants on Fire claims. Compared to the next most extreme value, FOX had 0.63x as many True statements as NBC, and 3.19x as many Pants on Fire statements as CNN. Compared to Regional Stations, which has the lowest proportion of Pants on Fire claims, FOX news has 13.2x as many Pants on Fire claims.

Among the major national news channels, CNN, MSNBC, and NBC had nearly identical proportions of Pants on Fire claims, 0.58, 0.050, and 0.055 respectively.
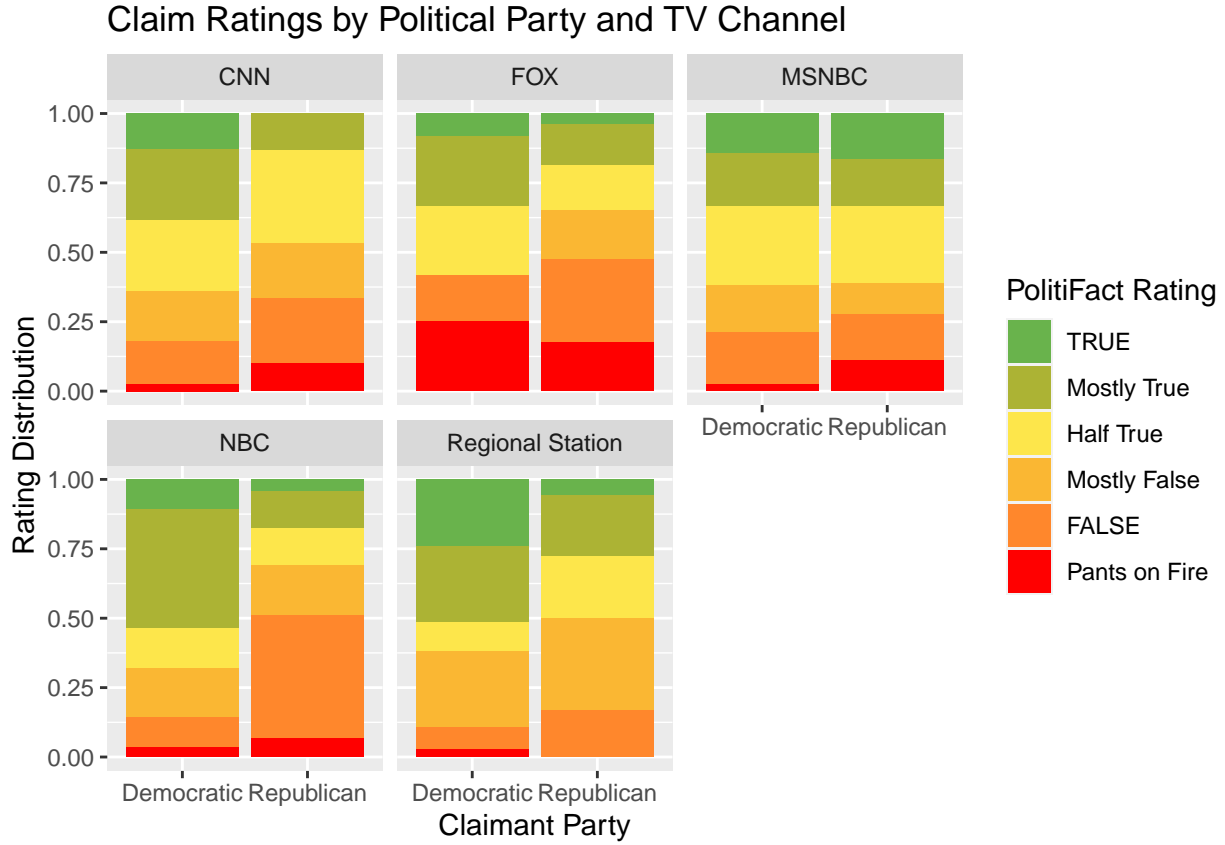
Claim Ratings by Political Party and TV Channel

Table 9: Claim Distribution on FOX

claimant_party	TRUE	Mostly True	Half True	FALSE	Pants on Fire	Mostly False
Democratic	1	3	3	2	3	0
Republican	3	12	13	24	14	14

Table 10: Claim Distribution on CNN

claimant_party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	5	10	10	7	6	1
Republican	0	4	10	6	7	3

Table 11: Claim Distribution on MSNBC

claimant_party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	6	8	12	7	8	1
Republican	3	3	5	2	3	2

Table 12: Claim Distribution on NBC

claimant_party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	3	12	4	5	3	1
Republican	2	6	6	8	20	3

Table 13: Claim Distribution on Regional Station

claimant_party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	9	10	4	10	3	1
Republican	2	8	8	12	6	0

Table 14: Claim Rating Proportions by Party and TV Channel

channel	party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
CNN	Democratic	0.128	0.256	0.256	0.179	0.154	0.026
CNN	Republican	0.000	0.133	0.333	0.200	0.233	0.100
FOX	Democratic	0.083	0.250	0.250	0.000	0.167	0.250
FOX	Republican	0.038	0.150	0.162	0.175	0.300	0.175
MSNBC	Democratic	0.143	0.190	0.286	0.167	0.190	0.024
MSNBC	Republican	0.167	0.167	0.278	0.111	0.167	0.111
NBC	Democratic	0.107	0.429	0.143	0.179	0.107	0.036
NBC	Republican	0.044	0.133	0.133	0.178	0.444	0.067
Regional Station	Democratic	0.243	0.270	0.108	0.270	0.081	0.027
Regional Station	Republican	0.056	0.222	0.222	0.333	0.167	0.000

Some interesting trends to note among the checked claims:

- Virtually no True statements made by Republicans on CNN

- Highest proportion of Pants on Fire claims made by Democrats on FOX (25.0% of Democratic claims checked on FOX)

- About equal proportion of False-ish statements on MSNBC (38.1% for Democrats, 38.9% for Republicans)

- Republicans appear to lie most on NBC, with 68.9% of claims checked as False-ish

- NBC also has the largest difference between True-ish statements by party, 67.9% Democratic claims were checked as True-ish whereas only 31.0% of Republican claims were checked as True-ish. This is a 36.9% difference.

- Virtually no Pants on Fire statements made by Republicans on Regional Stations

Speech/Remarks

Table 15: Democrats Claim Location by Proportion

location.extra	prop
Campaign	0.39226519
Hearing	0.04143646
Press Event	0.15469613
Unspecified	0.41160221

Table 16: Republicans Claim Location by Proportion

location.extra	prop
Campaign	0.24418605
Hearing	0.07751938
Press Event	0.28682171
Unspecified	0.39147287

In our data, it appears that Democrats had a higher proportion of claims checked from Campaign events, 39.2%, than Republicans 24.4%. Conversley, Republicans had more checked statements at Press Events than Democrats, 28.7% versus 15.5%. Both had a very minimal amount of statements checked in Hearings, though Republicans had nearly 2x more claims, 7.8% of their total claims when compared to 4.1%.
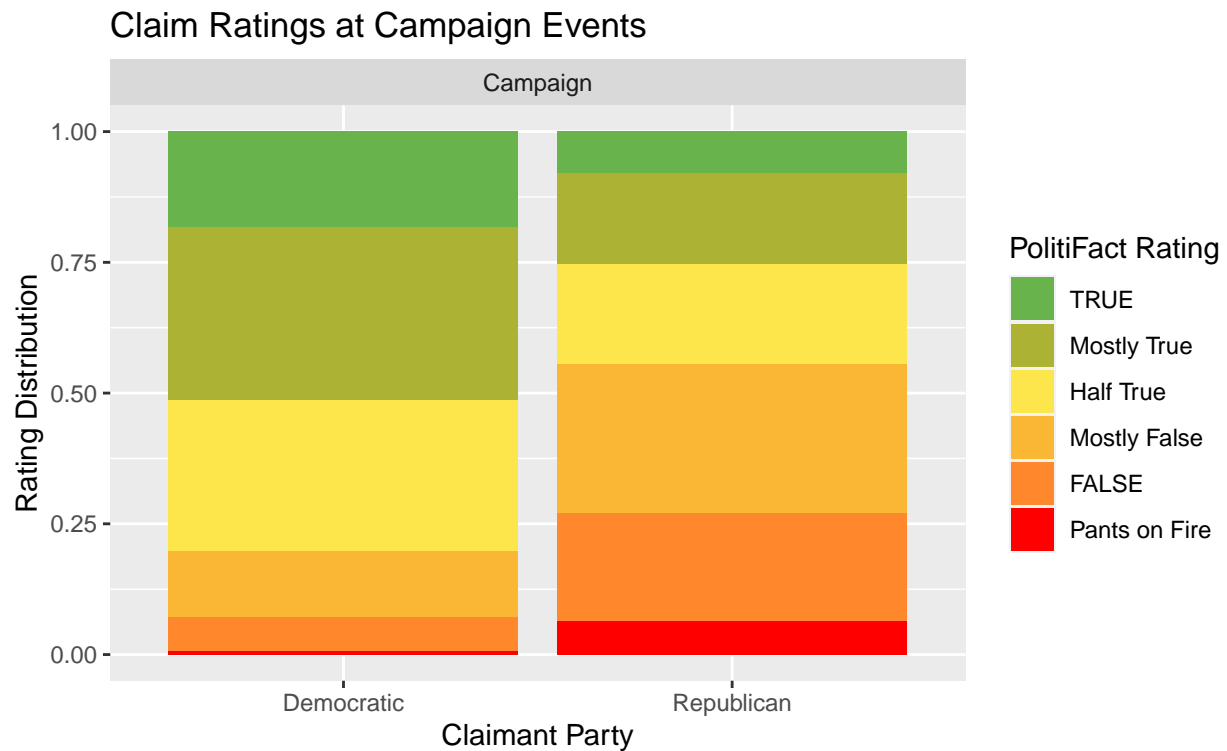
Campaign Event Statements

Claim Ratings at Campaign Events

Table 17: Claim Rating Proportion by Party

party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	0.183	0.331	0.289	0.127	0.063	0.007
Republican	0.079	0.175	0.190	0.286	0.206	0.063

Press Event Statements

Claim Ratings at Press Events
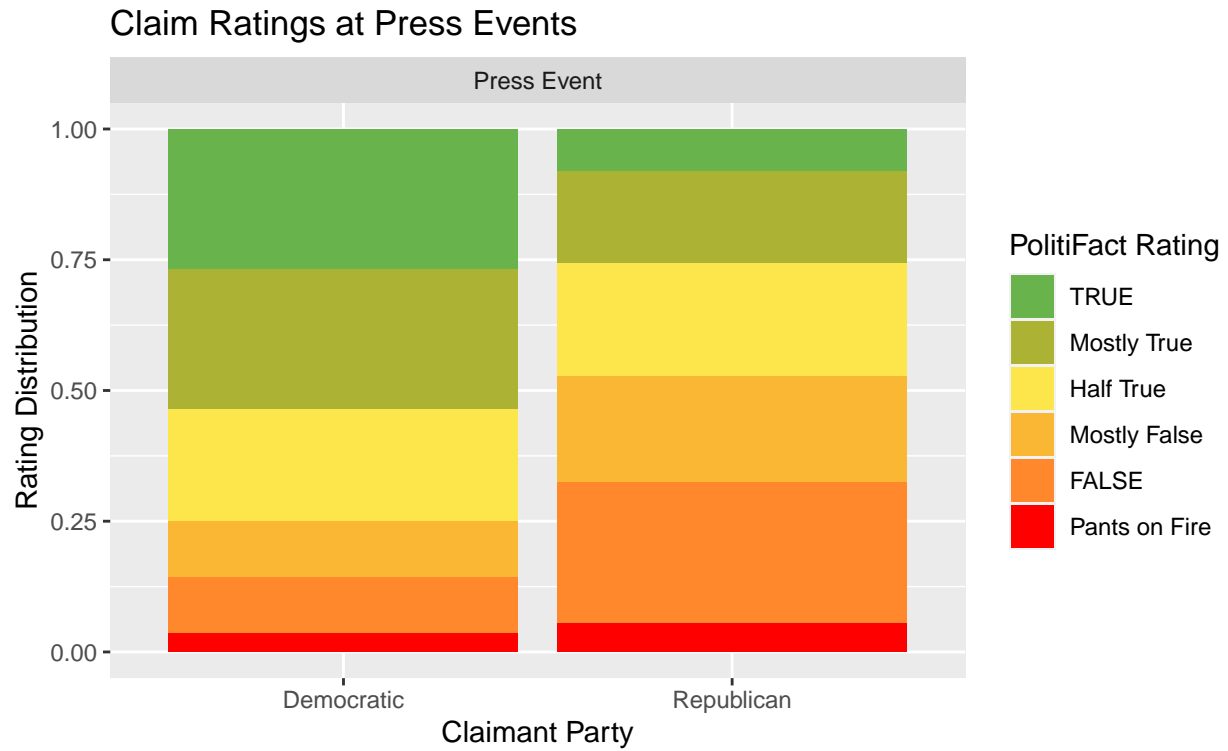
Table 18: Claim Rating Proportion by Party

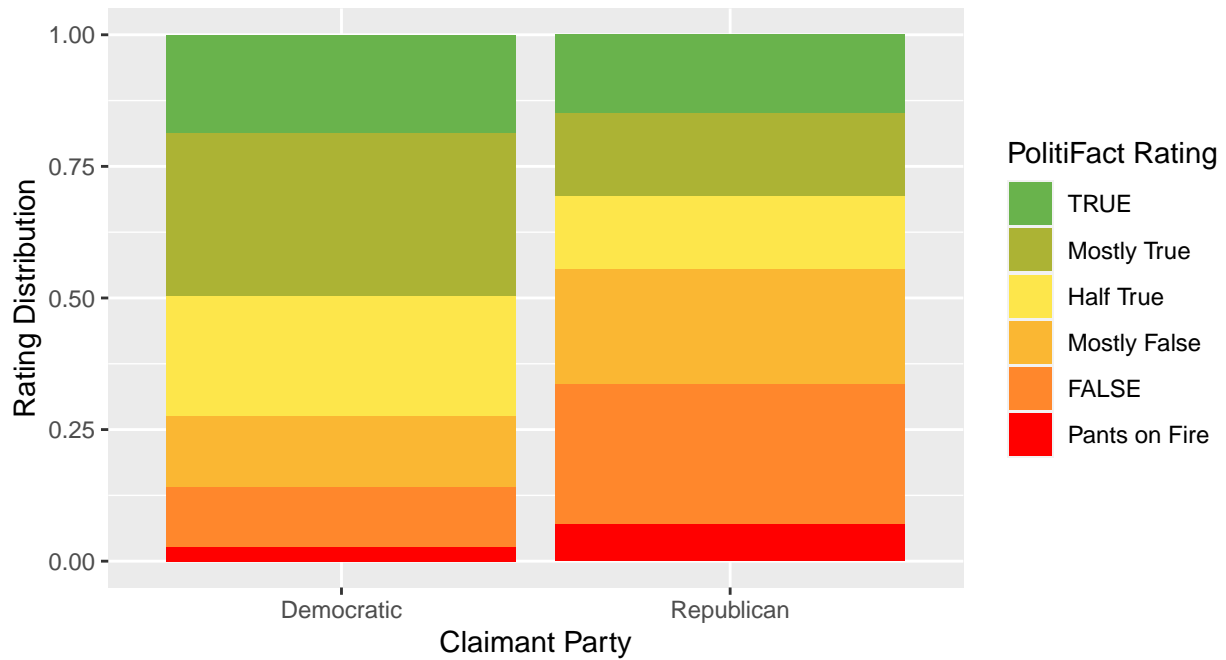| party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	0.183	0.331	0.289	0.127	0.063	0.007
Republican	0.079	0.175	0.190	0.286	0.206	0.063

Statements in Hearings

Claim Ratings in Hearings
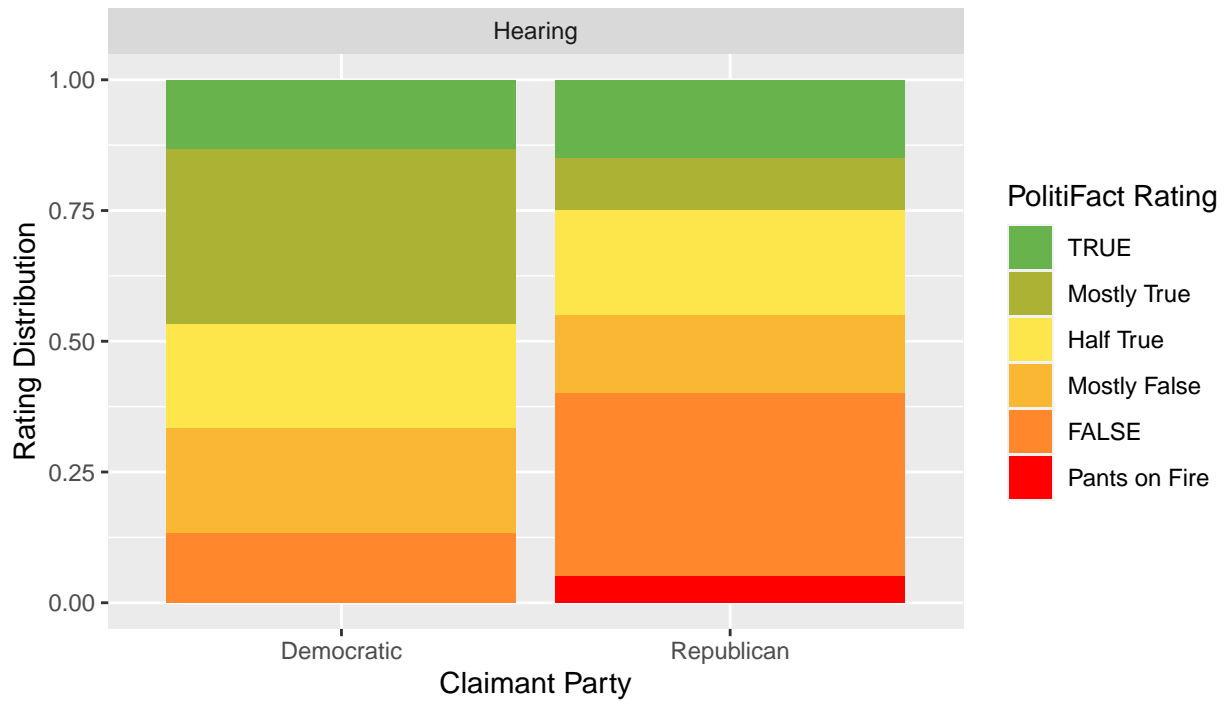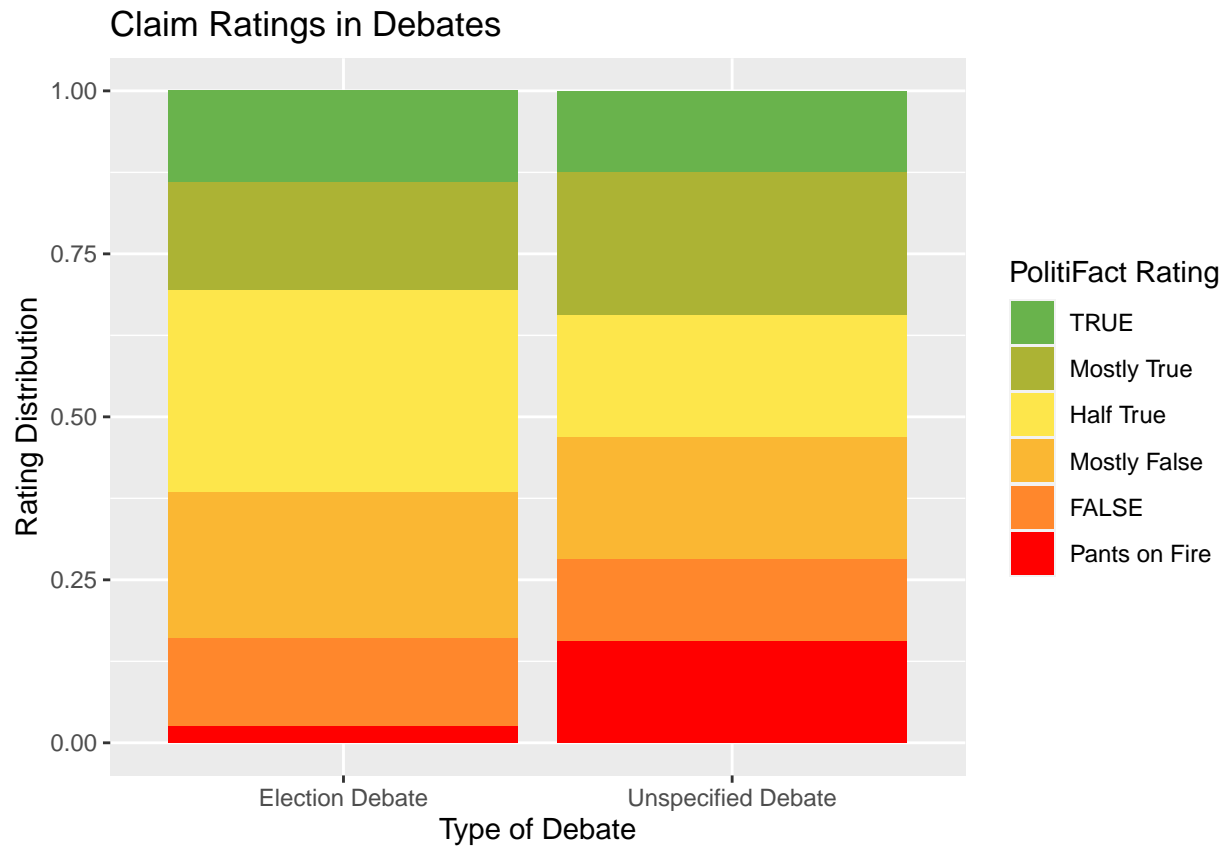

Claim Ratings in Speeches/Remarks

Not listed as Press Events, Campaign Events, or Hearings

Debates

Table 19: Type of Debate, count

location.extra	count
Election Debate	193
Unspecified Debate	32

Claim Ratings in Debates

An unspecified debate is something like: a roundtable discussion, debates between politicians and a news anchor, or legislative debates.

An election debate is a debate between two candidates actively engaged in campaigns against each other.

```
## `summarise()` has grouped output by 'location.extra'. You can override using the `.groups` argument.
```

Table 20: Type of Debate by Party, count

claimant_party	Election Debate	Unspecified Debate
Democratic	120	15
Republican	73	17

Claim Ratings in Debates, by Political Party