Location of the Lie EDA

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Data: The data used in this analysis is the compilation of claims fact checked by PolitiFact made by Republican or Democratic political figures between *Jan 1st 2016* and *June 30th 2021*, excluding all statements made by Donald Trump.

Exploratory Data Analysis

Table 1: Distribution of All Claims by Location

location	count	percentage
Speech/Remarks	593	24.0
TV Appearance	469	19.0
Social Media	404	16.4
Written Statement	281	11.4
Debate	225	9.1
Interview	208	8.4
Advertisement	188	7.6
Public Event	101	4.1

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`.

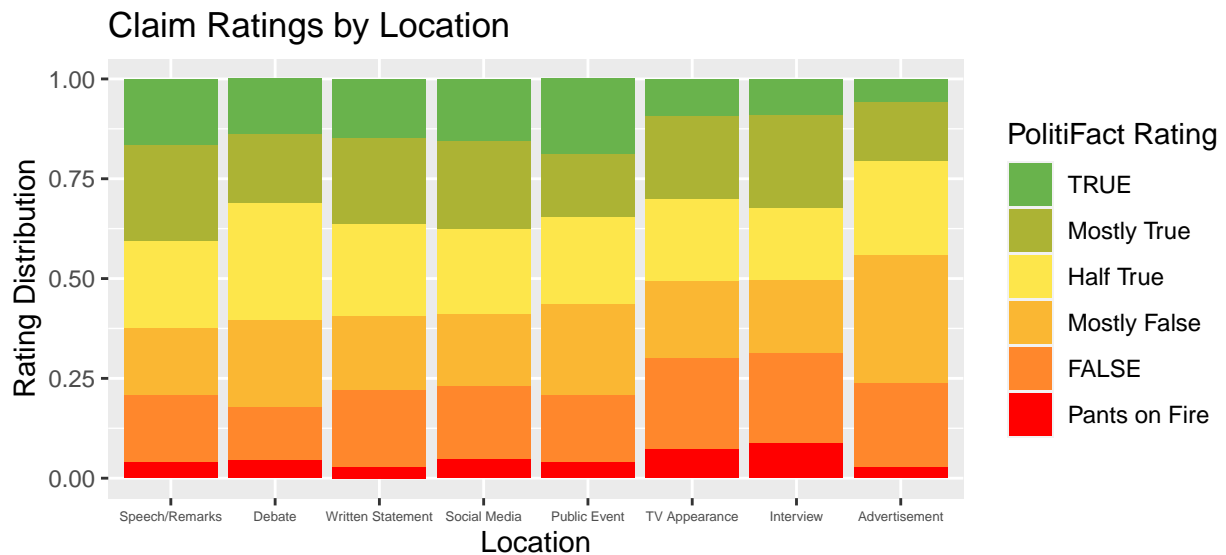Table 2: Proportion of Ratings in Percent, by Location

location	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Advertisement	5.9	14.9	23.4	31.9	21.3	2.7
Debate	13.8	17.3	29.3	21.8	13.3	4.4
Interview	9.1	23.1	18.3	18.3	22.6	8.7
Public Event	18.8	15.8	21.8	22.8	16.8	4.0
Social Media	15.6	22.0	21.3	18.1	18.3	4.7
Speech/Remarks	16.5	24.1	21.8	16.9	16.9	3.9
TV Appearance	9.4	20.7	20.7	19.2	22.8	7.2
Written Statement	14.9	21.4	23.1	18.5	19.2	2.8

The highest proportion of True-ish (True, Mostly True, Half True) claims are made in `Speech/Remarks` (62.4%). The lowest proportion of True-ish claims are made in `Advertisements` (44.2%). The highest proportion of Pants on Fire claims appear in `Interviews` (8.7%). The highest proportion of True statements are made at `Public Events` (18.8%).

Table 3: Claims Count by Party

claimant_party	count	percentage
Democratic	1284	52
Republican	1185	48

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 the ratio of Democrat's claims to Republican's is 1.09 : 1.
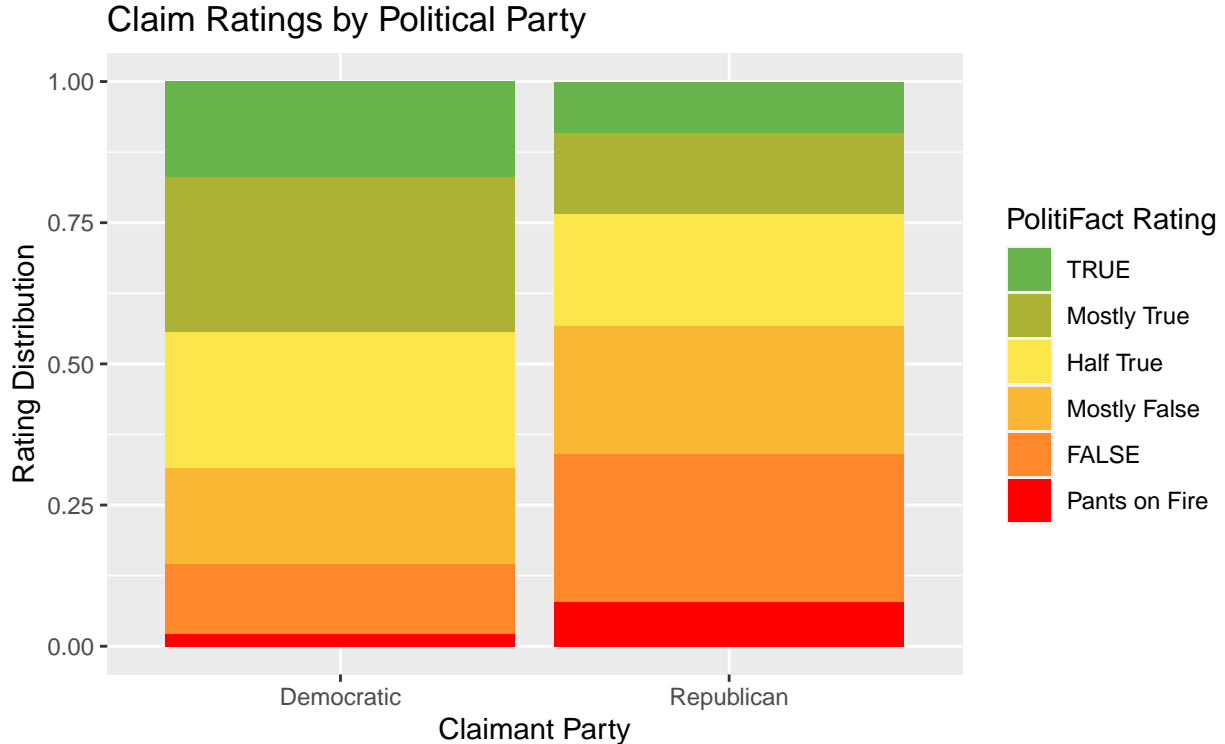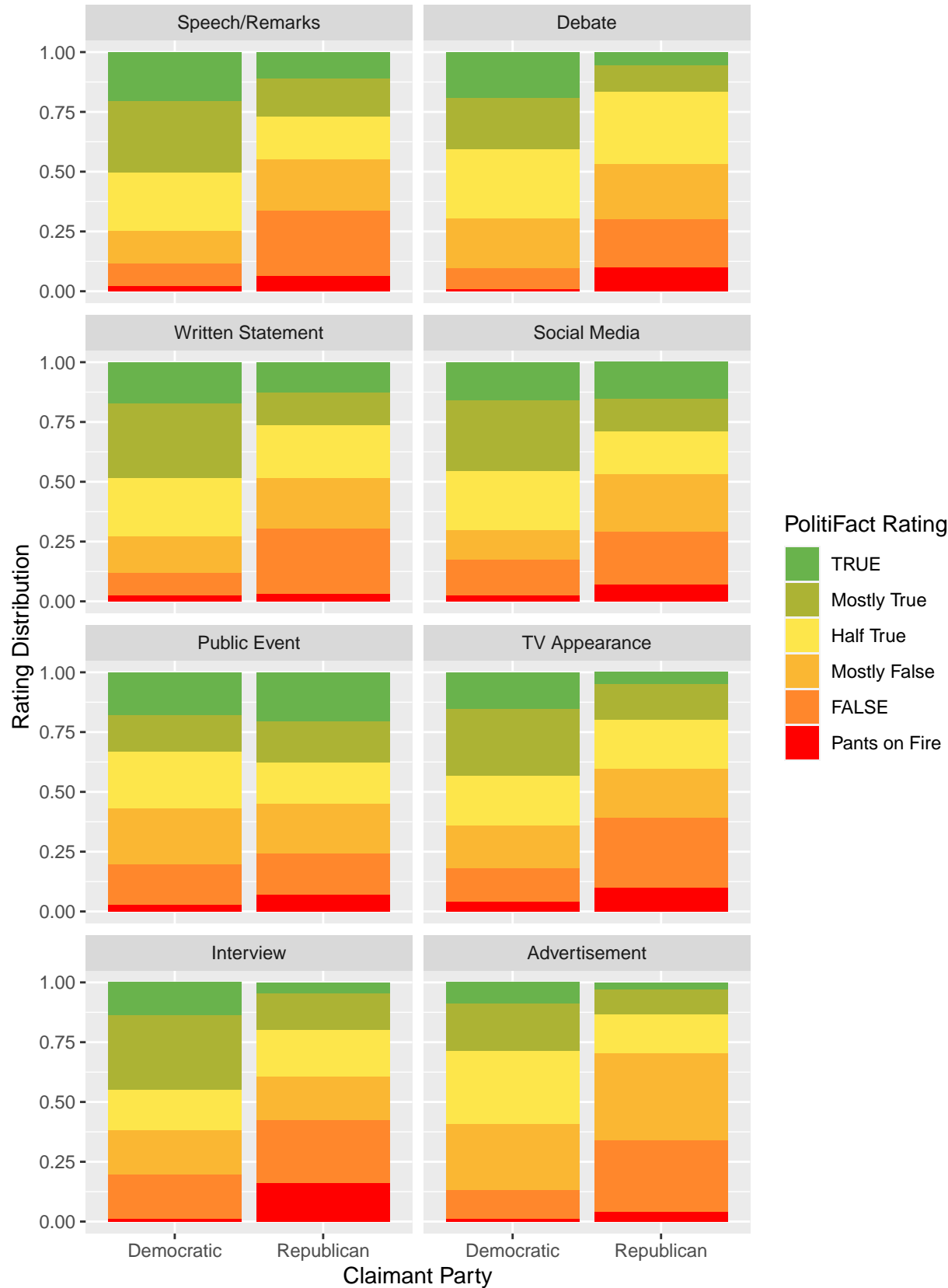

Claim Ratings by Political Party

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	208	346	204	126
Republican	97	90	106	29	196	247	265	155

Comparing the ratio of claim counts by Party and Location, `Interview`, `Advertisement`, and `Social Media` have nearly a 1 : 1 ratio of Democratic to Republican claims. `Public Event` has the most egregious difference, with a ratio of 2.48 : 1 Democratic to Republican claims. `Debate`, `Speech/Remarks`, `TV Appearance`, and `Written Statements` have no greater than a 1.5 : 1 ratio.

Some of these differences, namely the 1.5 : 1 ratio of Democratic to Republican claims in the `Debate` category may be attributable to the omission of Trump from the dataset, as all of Clinton's claims from their 2016 debates are included, but his are not.

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	336
Various Platforms	1
YouTube	2

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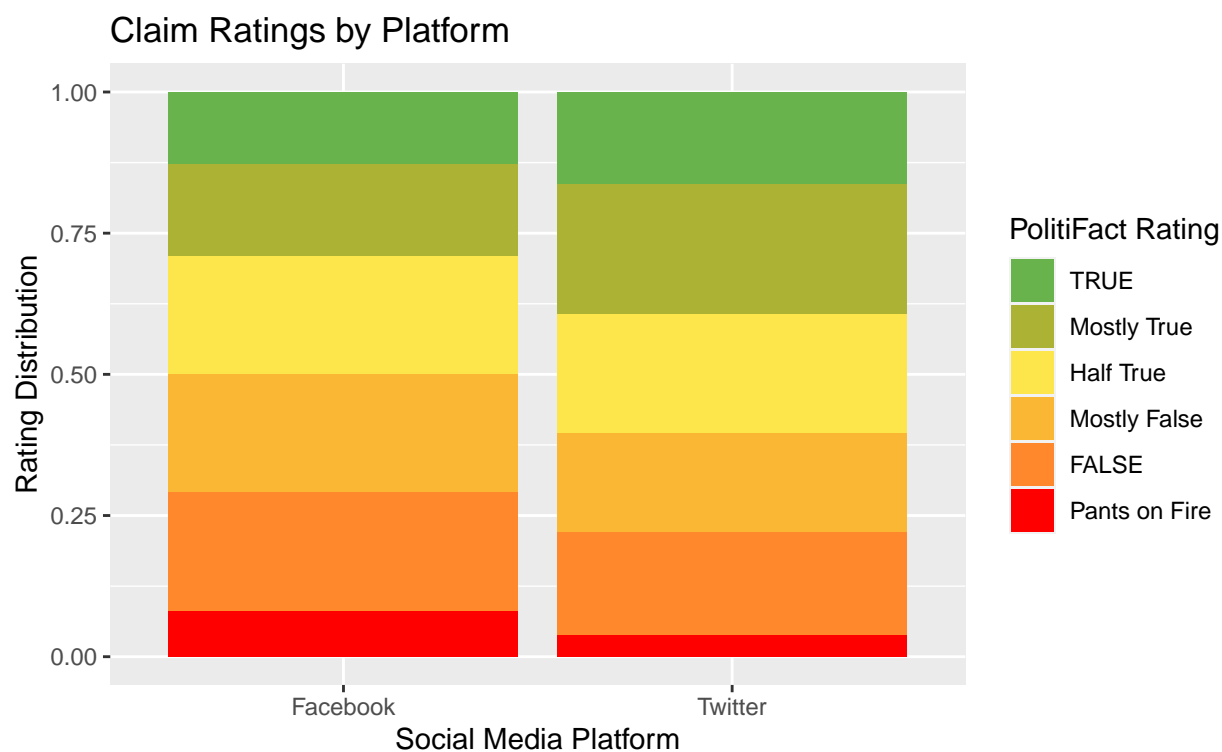
Claim Ratings by Platform

Table 6: Percentage of Ratings by Platform

platform	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Facebook	12.9	16.1	21.0	21.0	21.0	8.1
Twitter	16.4	22.9	21.1	17.6	18.2	3.9

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 39.7% of the same on Twitter. Twitter also had a higher proportion of True statements checked, 16.4% to Facebook's 12.9%, about 1.27x higher. There are 2.08x as many Pants on Fire claims on Facebook when compared to Twitter.
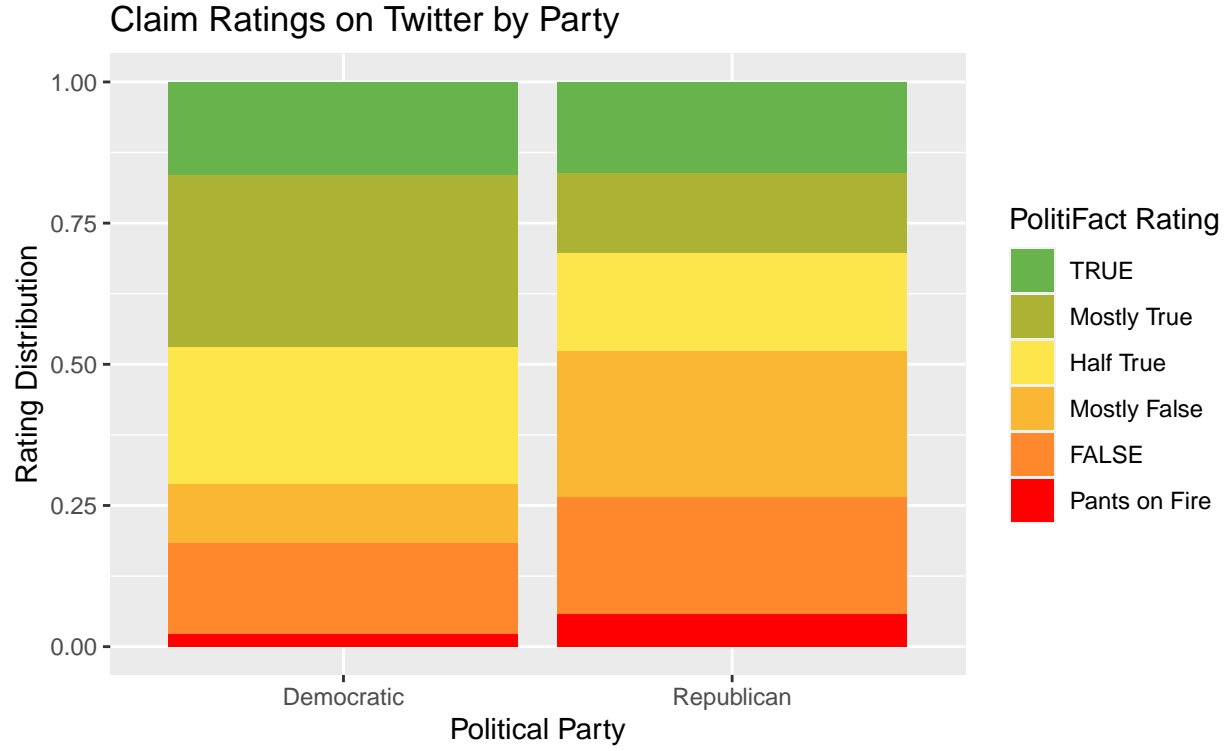
Claim Ratings on Twitter by Party

Table 7: Twitter Claims by Party

Democratic	Republican
181	155

Table 8: Percentage of Claims by Rating and Party

party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	16.6	30.4	24.3	10.5	16.0	2.2
Republican	16.1	14.2	17.4	25.8	20.6	5.8

Table 9: Count of Claims by Rating and Party

party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
Democratic	30	55	44	19	29	4
Republican	25	22	27	40	32	9

TV Appearance

Table 10: Distribution of TV Appearances

location.extra	count
ABC	47
Bloomberg	2
CBS	35
CNBC	2
CNN	68
Comedy Central	1
Digital Platform	2
EWTN	1
FOX	90
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 30 claims were made. This leaves: ABC, CBS, CNN, FOX, MSNBC, NBC, and the Regional Station tag.
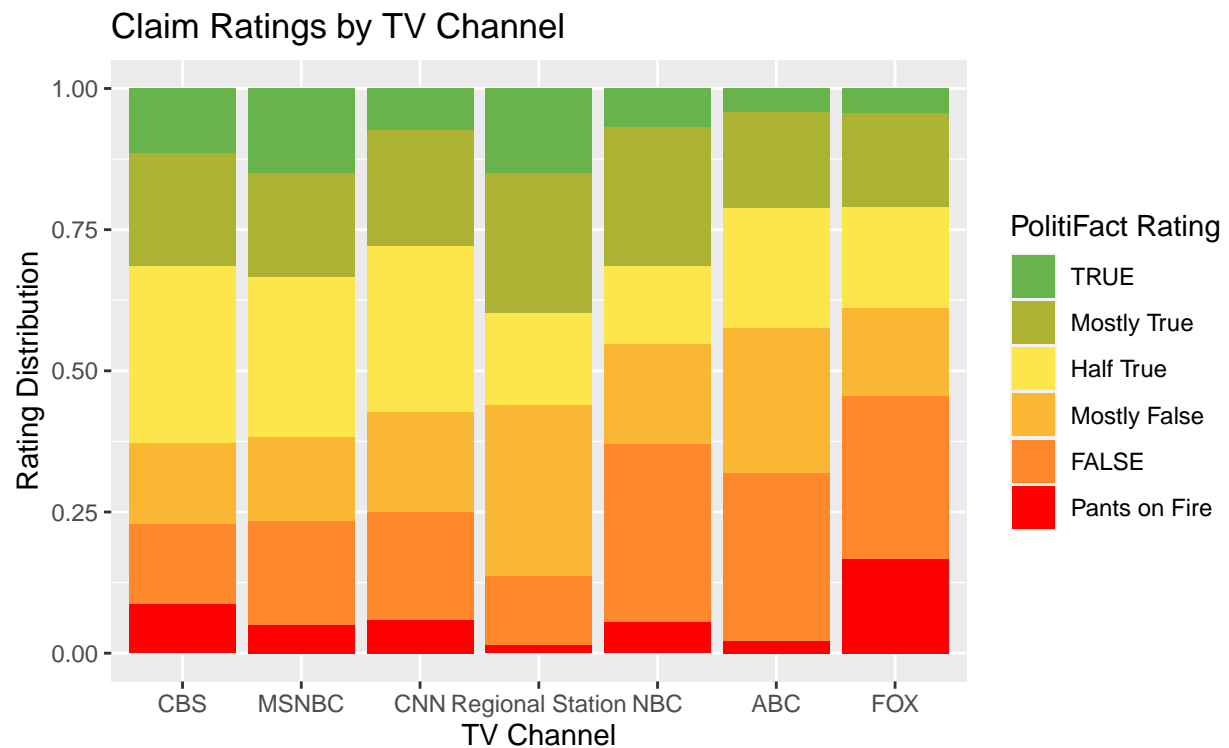
Table 11: Claim Rating Proportions by TV Channel

channel	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
ABC	4.3	17.0	21.3	25.5	29.8	2.1
CBS	11.4	20.0	31.4	14.3	14.3	8.6
CNN	7.4	20.6	29.4	17.6	19.1	5.9
FOX	4.4	16.7	17.8	15.6	28.9	16.7
MSNBC	15.0	18.3	28.3	15.0	18.3	5.0
NBC	6.8	24.7	13.7	17.8	31.5	5.5
Regional Station	15.1	24.7	16.4	30.1	12.3	1.4

Basing trueness on Half True, Mostly True, and True statements, the descending order of trueness by TV Channel goes as follows: CBS (62.8%), MSNBC (61.6% True-ish), CNN (57.4% True-ish), Regional Stations (56.2% True-ish), NBC (45.2% True-ish), ABC (42.6% True-ish and finally FOX (38.9% True-ish).

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 12: Claim Count by Party and TV Channel
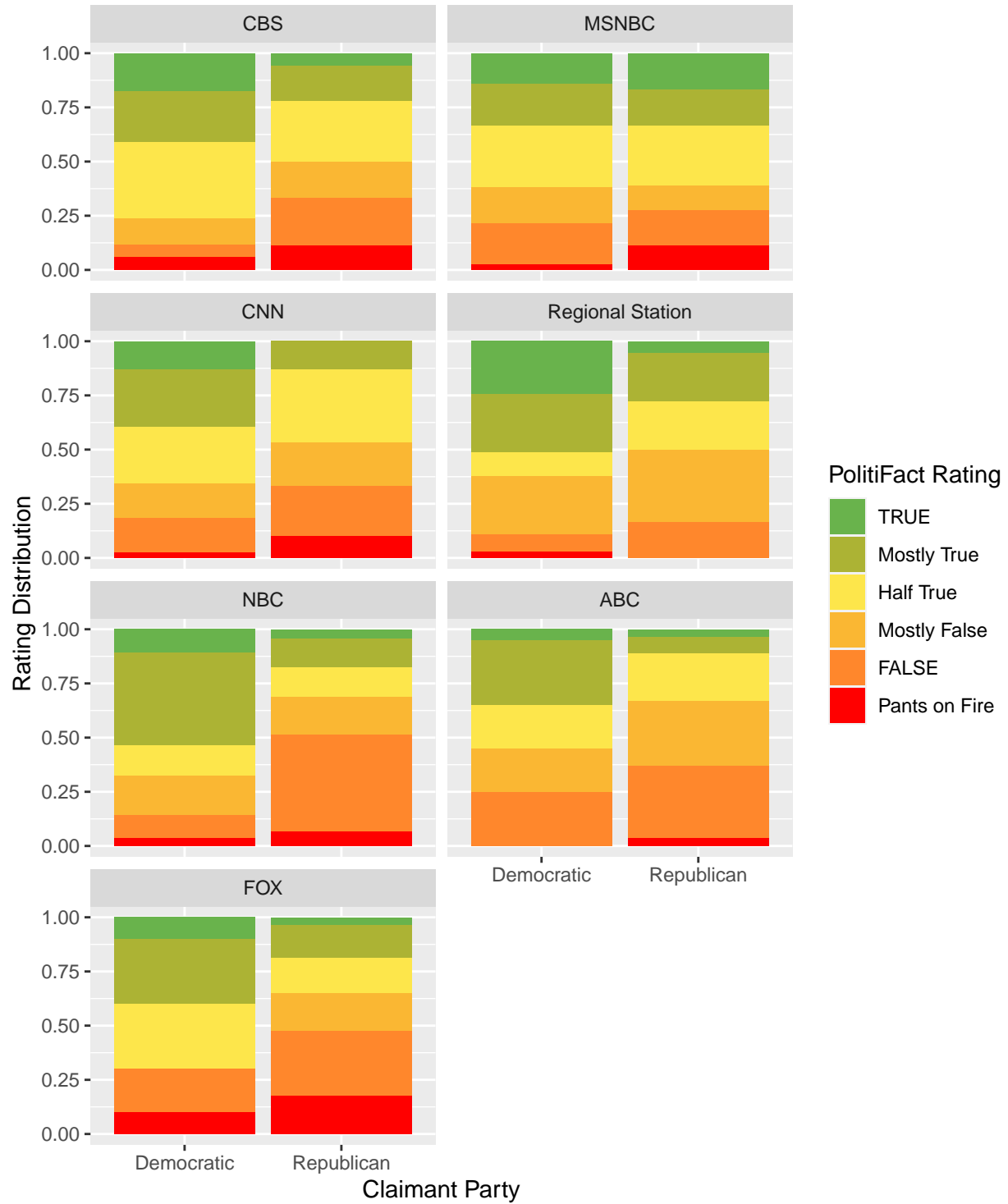
channel	party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
ABC	Democratic	1	6	4	4	5	0

channel	party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
ABC	Republican	1	2	6	8	9	1
CBS	Democratic	3	4	6	2	1	1
CBS	Republican	1	3	5	3	4	2
CNN	Democratic	5	10	10	6	6	1
CNN	Republican	0	4	10	6	7	3
FOX	Democratic	1	3	3	0	2	1
FOX	Republican	3	12	13	14	24	14
MSNBC	Democratic	6	8	12	7	8	1
MSNBC	Republican	3	3	5	2	3	2
NBC	Democratic	3	12	4	5	3	1
NBC	Republican	2	6	6	8	20	3
Regional Station	Democratic	9	10	4	10	3	1
Regional Station	Republican	2	8	8	12	6	0

Table 13: Claim Rating Proportions by Party and TV Channel

channel	party	TRUE	Mostly True	Half True	Mostly False	FALSE	Pants on Fire
ABC	Democratic	5.0	30.0	20.0	20.0	25.0	0.0
ABC	Republican	3.7	7.4	22.2	29.6	33.3	3.7
CBS	Democratic	17.6	23.5	35.3	11.8	5.9	5.9
CBS	Republican	5.6	16.7	27.8	16.7	22.2	11.1
CNN	Democratic	13.2	26.3	26.3	15.8	15.8	2.6
CNN	Republican	0.0	13.3	33.3	20.0	23.3	10.0
FOX	Democratic	10.0	30.0	30.0	0.0	20.0	10.0
FOX	Republican	3.8	15.0	16.2	17.5	30.0	17.5
MSNBC	Democratic	14.3	19.0	28.6	16.7	19.0	2.4
MSNBC	Republican	16.7	16.7	27.8	11.1	16.7	11.1
NBC	Democratic	10.7	42.9	14.3	17.9	10.7	3.6
NBC	Republican	4.4	13.3	13.3	17.8	44.4	6.7
Regional Station	Democratic	24.3	27.0	10.8	27.0	8.1	2.7
Regional Station	Republican	5.6	22.2	22.2	33.3	16.7	0.0