

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	405	16.4
Written Statement	281	11.4
Debate	225	9.1
Interview	207	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.

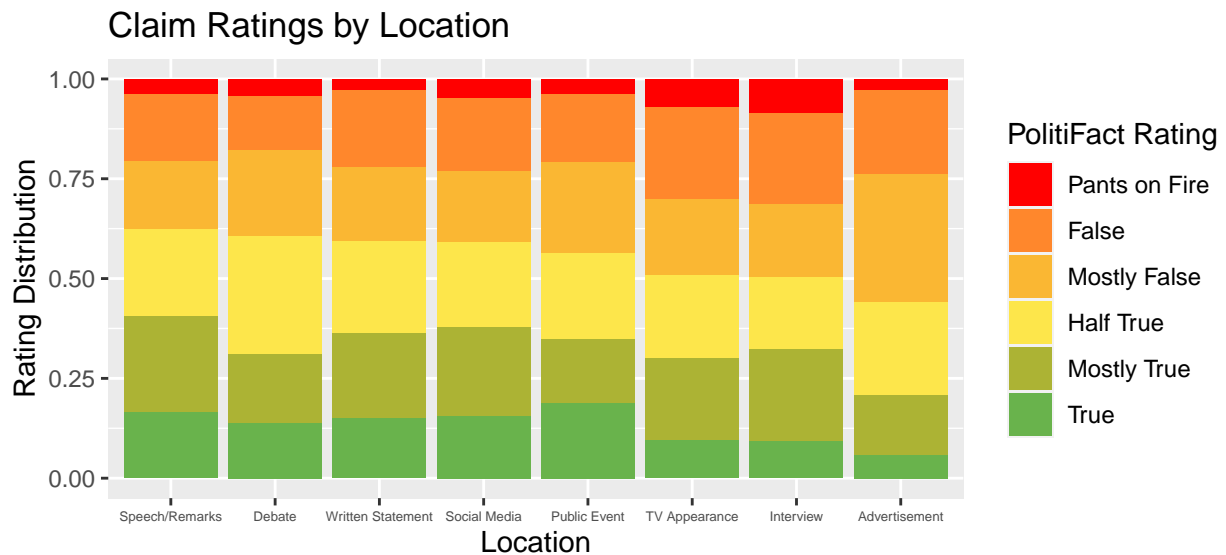


Table 2: Proportion of Ratings in Percent, by Location

location	Pants on Fire	False	Mostly False	Half True	Mostly True	True
Advertisement	2.7	21.3	31.9	23.4	14.9	5.9
Debate	4.4	13.3	21.8	29.3	17.3	13.8
Interview	8.7	22.7	18.4	17.9	23.2	9.2
Public Event	4.0	16.8	22.8	21.8	15.8	18.8
Social Media	4.7	18.3	18.0	21.2	22.2	15.6
Speech/Remarks	3.9	16.9	16.9	21.8	24.1	16.5
TV Appearance	7.2	22.8	19.2	20.7	20.7	9.4
Written Statement	2.8	19.2	18.5	23.1	21.4	14.9

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	1285	52.05
Republican	1184	47.95

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.

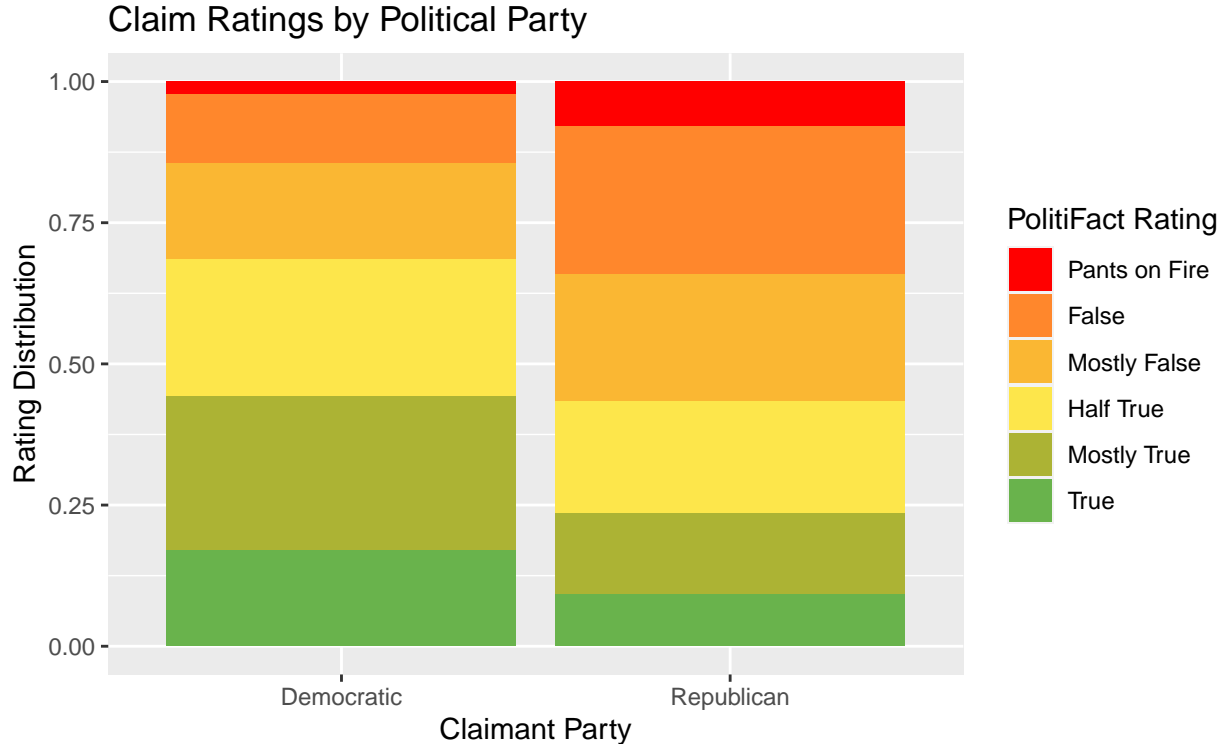


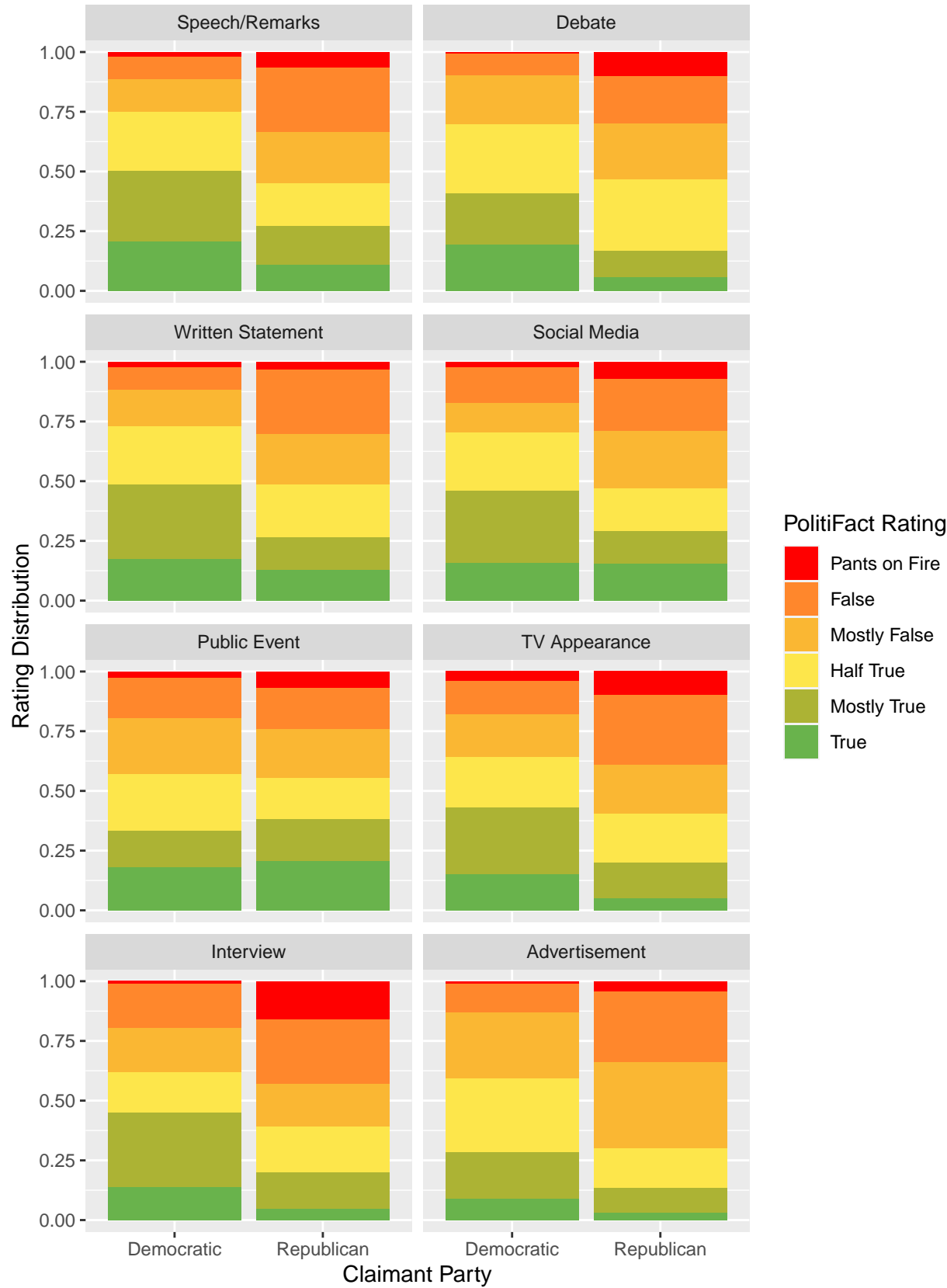
Table 4: Distribution of Claims by Party and Location

claimant_party	Advertisement	Debate	Interview	Public Event	Social Media	Speech/Remarks	TV Appearance	Written Statement
Democratic	91	135	102	72	209	346	204	126
Republican	97	90	105	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	337
Various Platforms	1
YouTube	2

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

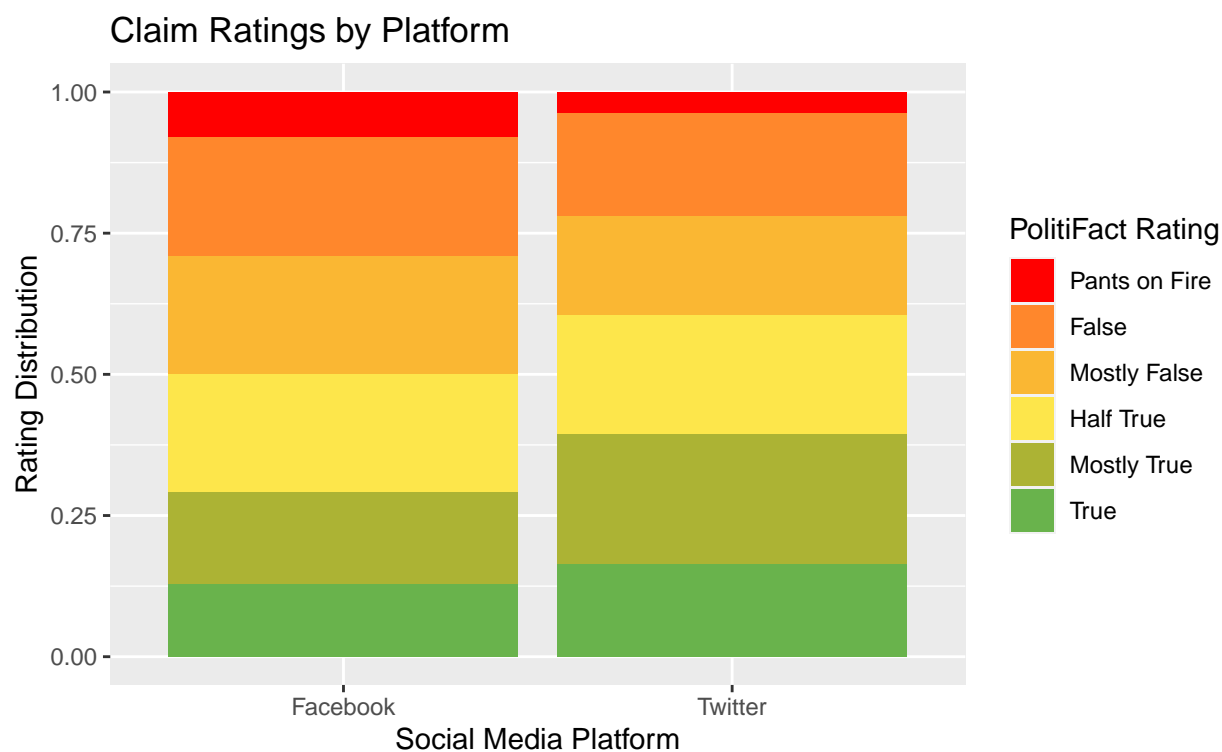


Table 6: Percentage of Ratings by Platform

platform	Pants on Fire	False	Mostly False	Half True	Mostly True	True
Facebook	8.1	21.0	21.0	21.0	16.1	12.9
Twitter	3.9	18.1	17.5	21.1	23.1	16.3

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.

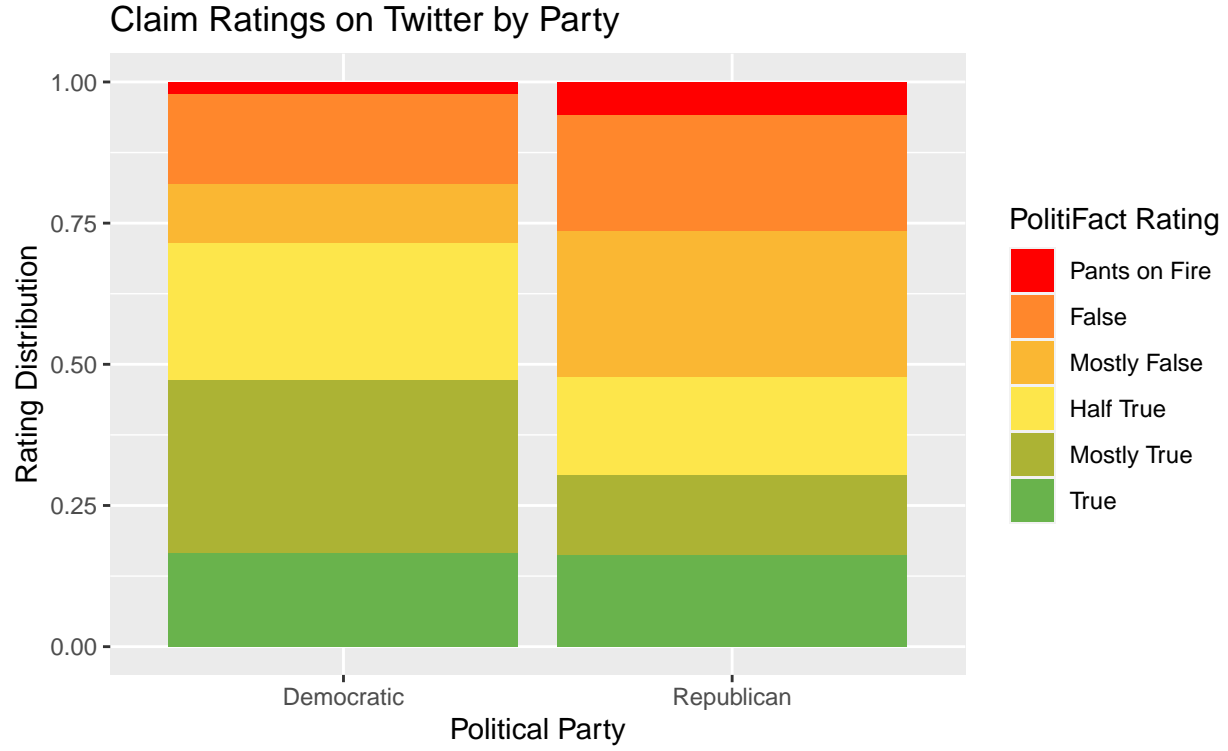


Table 7: Twitter Claims by Party

Democratic	Republican
182	155

Table 8: Percentage of Claims by Rating and Party

party	Pants on Fire	False	Mostly False	Half True	Mostly True	True
Democratic	2.2	15.9	10.4	24.2	30.8	16.5
Republican	5.8	20.6	25.8	17.4	14.2	16.1

Table 9: Count of Claims by Rating and Party

party	Pants on Fire	False	Mostly False	Half True	Mostly True	True
Democratic	4	29	19	44	56	30
Republican	9	32	40	27	22	25

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.

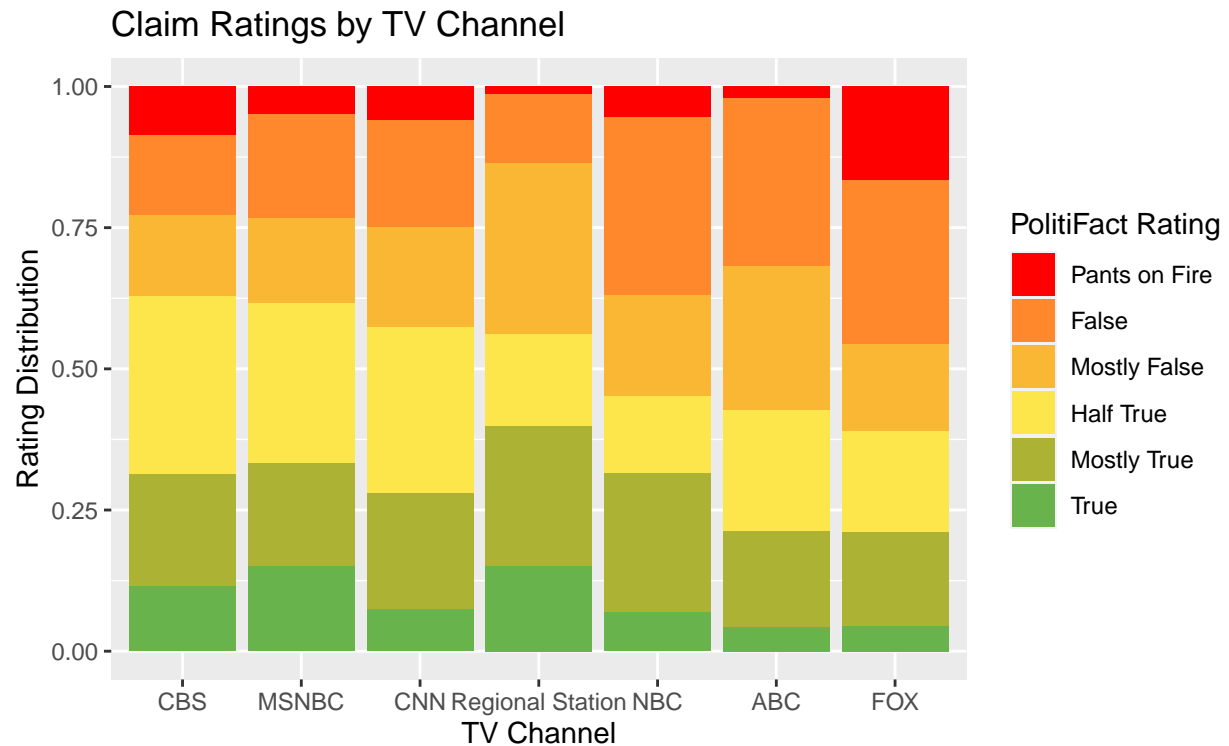


Table 11: Claim Rating Proportions by TV Channel

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

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, 0.059, 0.050, and 0.055 respectively.

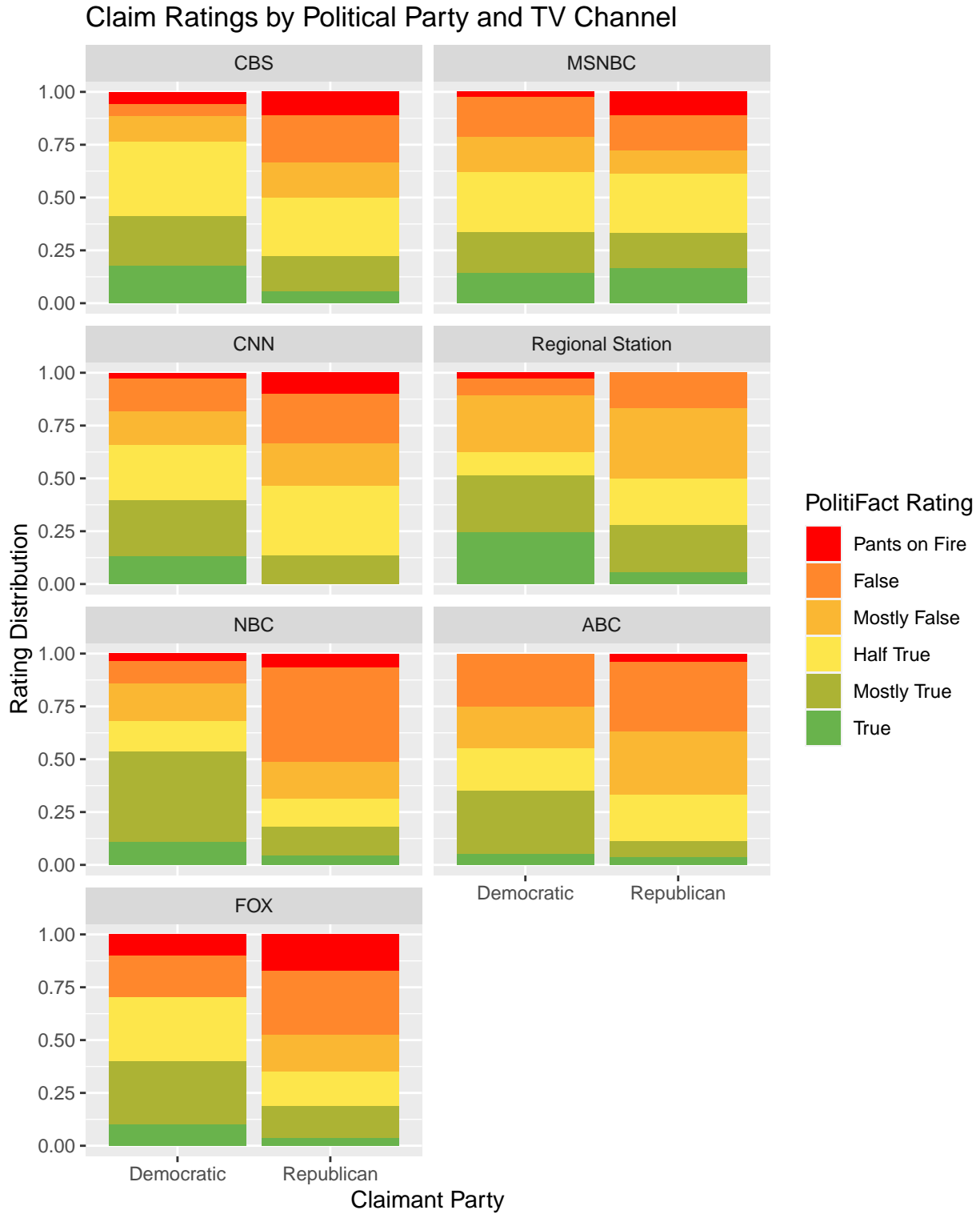


Table 12: Claim Count by Party and TV Channel

channel	party	False	Mostly False	Half True	Mostly True	True	Pants on Fire
ABC	Democratic	5	4	4	6	1	0

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

Table 13: Claim Rating Proportions by Party and TV Channel

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