

# Preliminary Results

*Group 3*

*April 25, 2016*

The data in this document were pulled from a database on April 29 2016 at 16:50. As like and tweet data is collected on a rolling basis, not all likes and tweets made up to that time are included.

## Descriptive Statistics

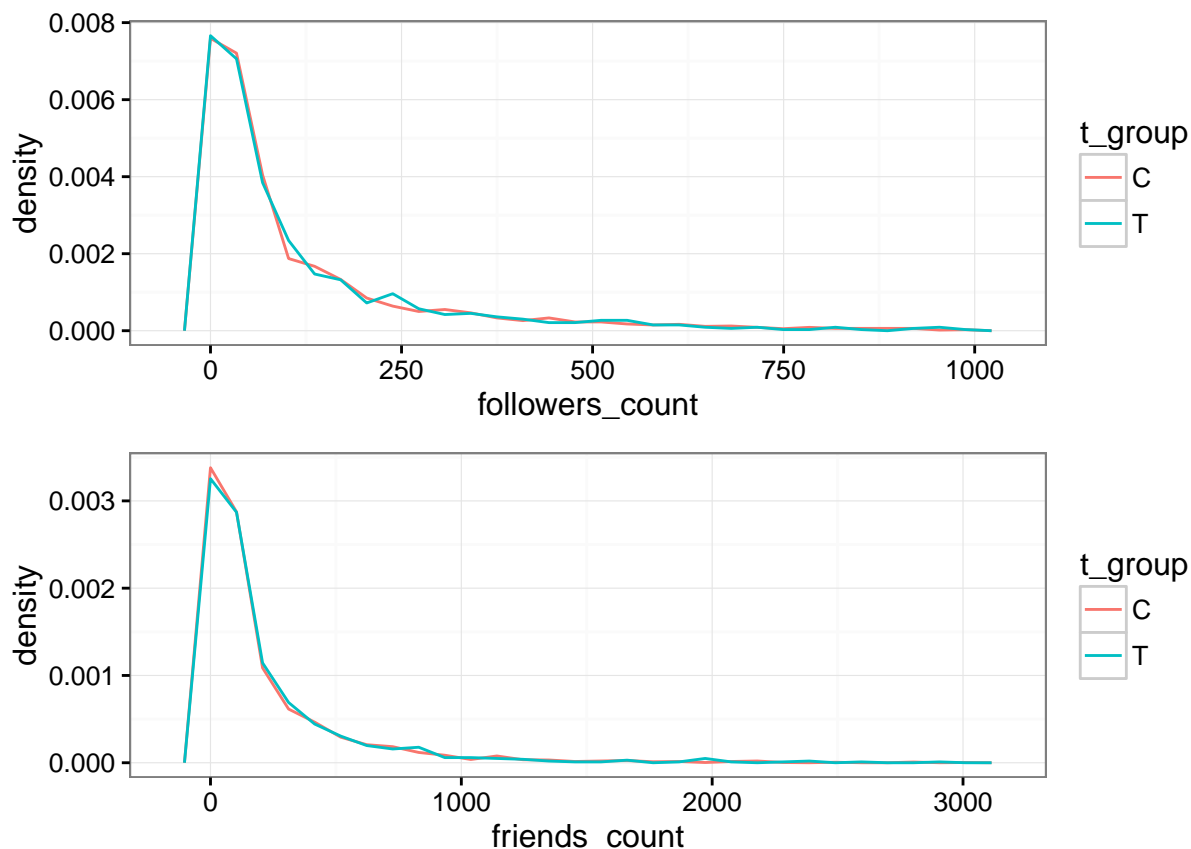
We show summary statistics for the treatment and control groups in the period before the treatment started, and plot frequency density plots of followers and friends counts.

Table 1: Summary statistics - treatment group

variable	mean	median	SE
average_keywords	2.0494823	0.9166667	0.1041827
average_likes	0.3852051	0.1666667	0.0213289
average_MAGA	0.1526284	0.0000000	0.0115283
average_mentions	1.1562127	0.5000000	0.0680698
average_rts	0.4703305	0.0000000	0.0503606
followers_count	114.1701346	53.0000000	5.4515111
friends_count	205.5728274	92.0000000	11.1872213

Table 2: Summary statistics - control group

variable	mean	median	SE
average_keywords	2.0711222	0.8333333	0.0586339
average_likes	0.3953043	0.1666667	0.0117356
average_MAGA	0.1663521	0.0000000	0.0075550
average_mentions	1.1829673	0.4166667	0.0376792
average_rts	0.4785518	0.0000000	0.0260877
followers_count	120.6464823	54.0000000	3.0578160
friends_count	210.5964298	93.0000000	5.8918038



## Treatment

We sent the following tweets to our treatment group

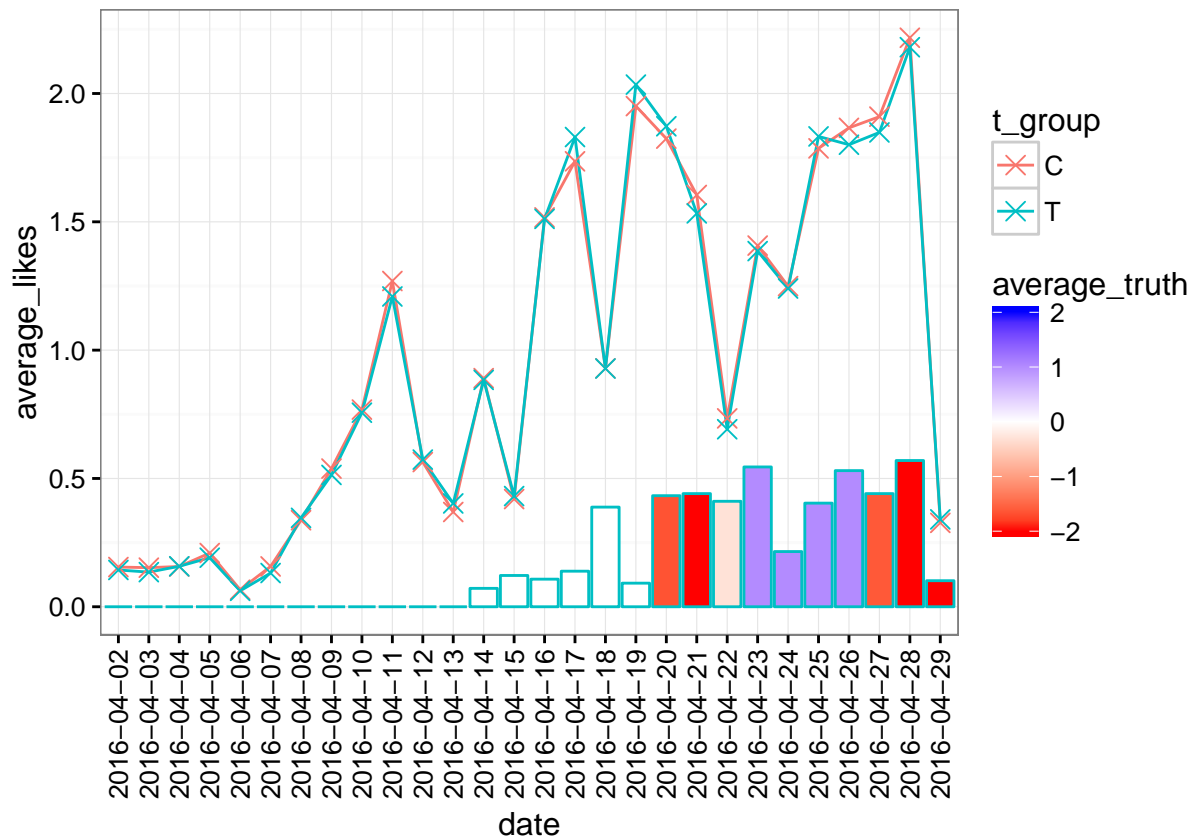
tweet_no	text	truth	start date
1	@LostinMemphis Trump says most wire transfers to Mexico from undocumented immigrants- half true says award-winning website Politifact	0	2016-04-14
2	@LostinMemphis Trump says his deficit to Clinton much smaller than Reagan's against Carter- false says award-winning website Politifact	-2	2016-04-20
3	@LostinMemphis Trump says Ted Cruz is mathematically out of winning the race - mostly true says politifact	1	2016-04-22
4	@LostinMemphis Trump says PA lost 35%, and Harrisburg 40%, of manufacturing jobs since 2001 - Mostly true says politifact	1	2016-04-25
5	@LostinMemphis Trump says football coach Rex Ryan won championships in NY twice - false says Politifact. He never did	-2	2016-04-27
6	@LostinMemphis Trump says ISIS makes millions of dollars a week by selling Libyan oil - false says Politifact	-2	2016-04-29

Table 3: Example tweets

## Results

We measure likes of trump tweets on each day, compare treatment and control groups, and show the fraction of the treatment group receiving treatment on each day with colour coded bars. The truth values of the bars are colour coded according to the following schema

Truth	Truth value
True	2
Mostly true	1
Half true	0
Mostly false	-1
False	-2



We also collect all tweets sent by each member of our observation group (removing those which are a retweet or a reply to one of our accounts). We categorise those tweets to measure various indicators of engagement with Trump. These are shown below.

## Numerical results

We have run simple regressions interacting the time variable and the treatment variable, to see if the differences between T and C groups on each day were significant.

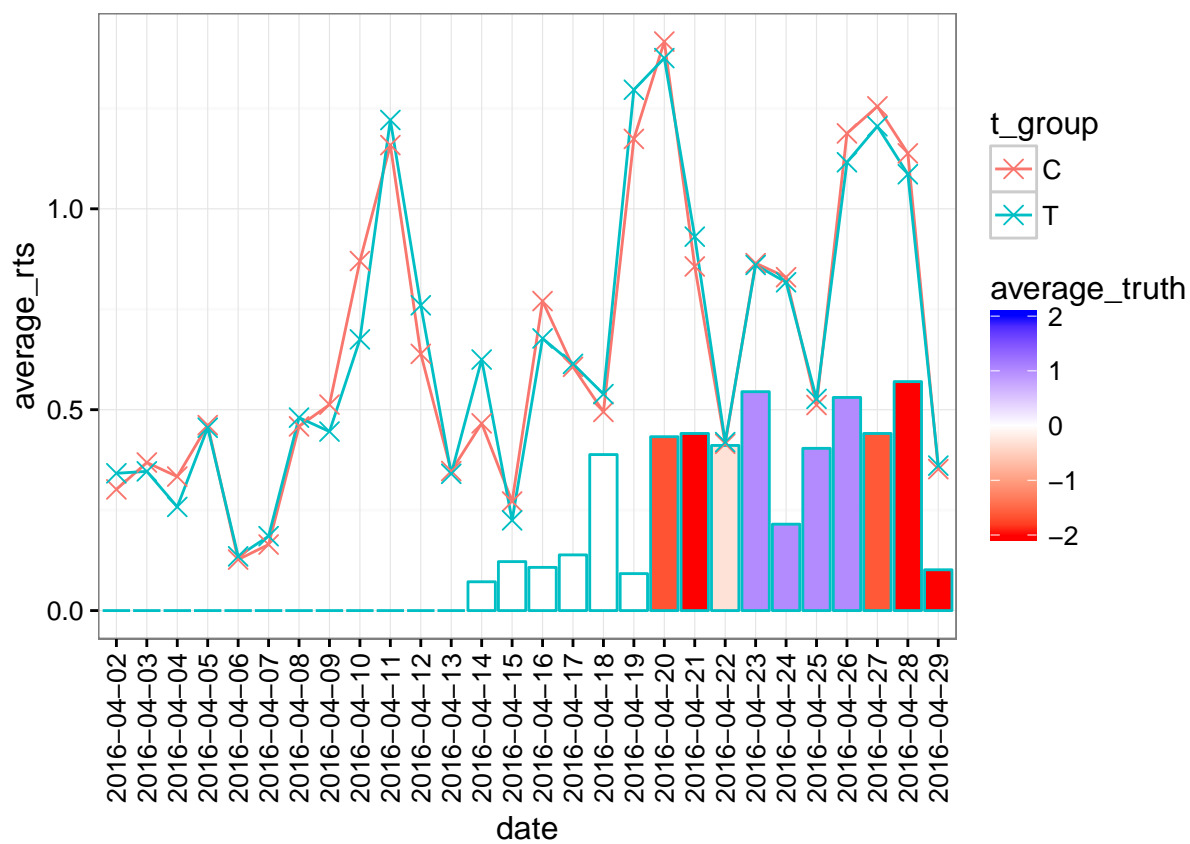


Figure 1: Average retweets of Trump

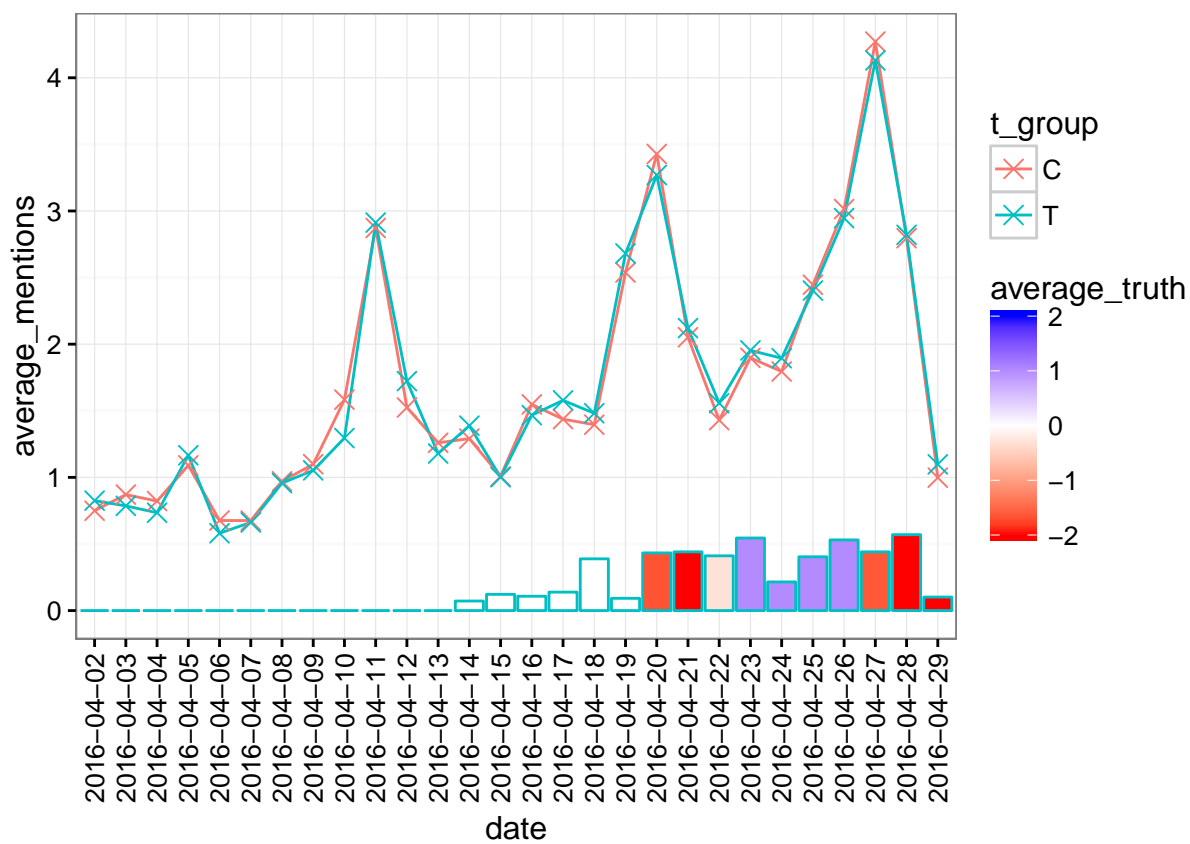


Figure 2: Averages tweets containing @RealDonaldTrump

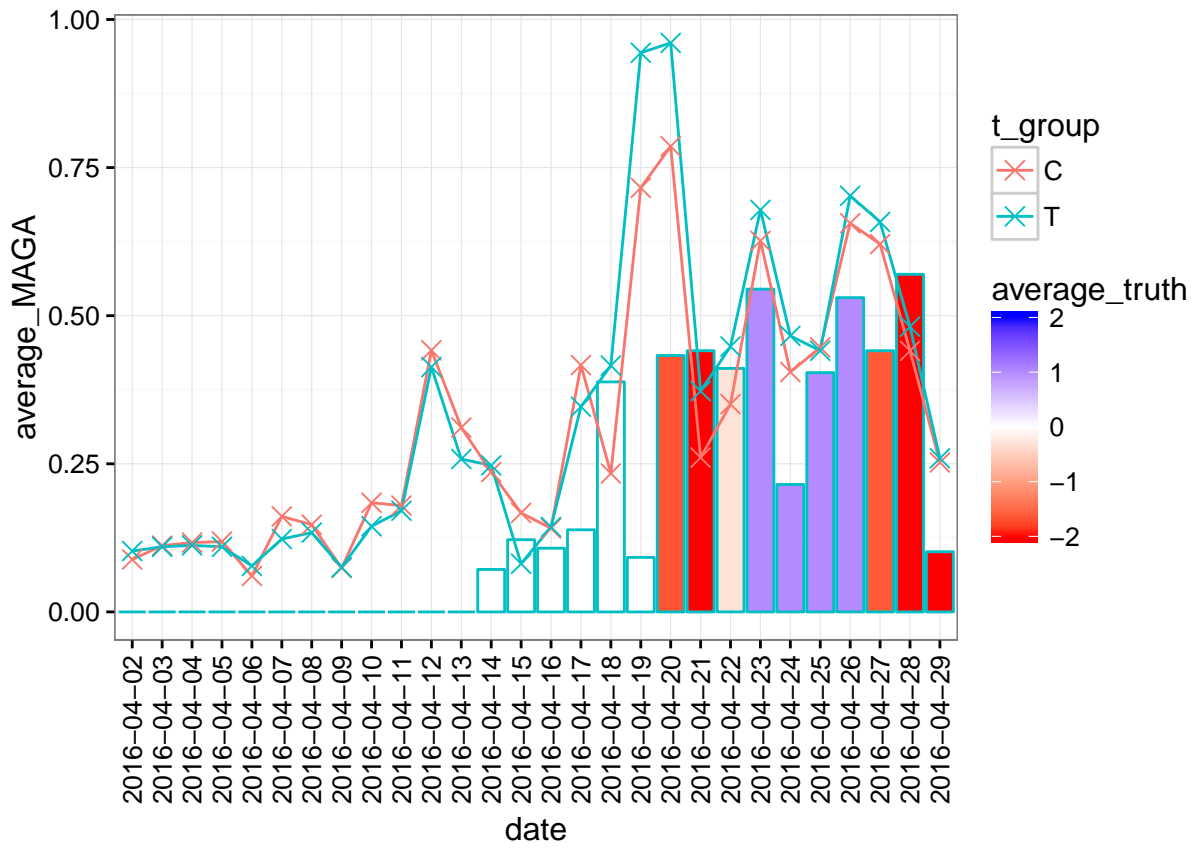


Figure 3: Average tweets using the hashtag #MakeAmericaGreatAgain

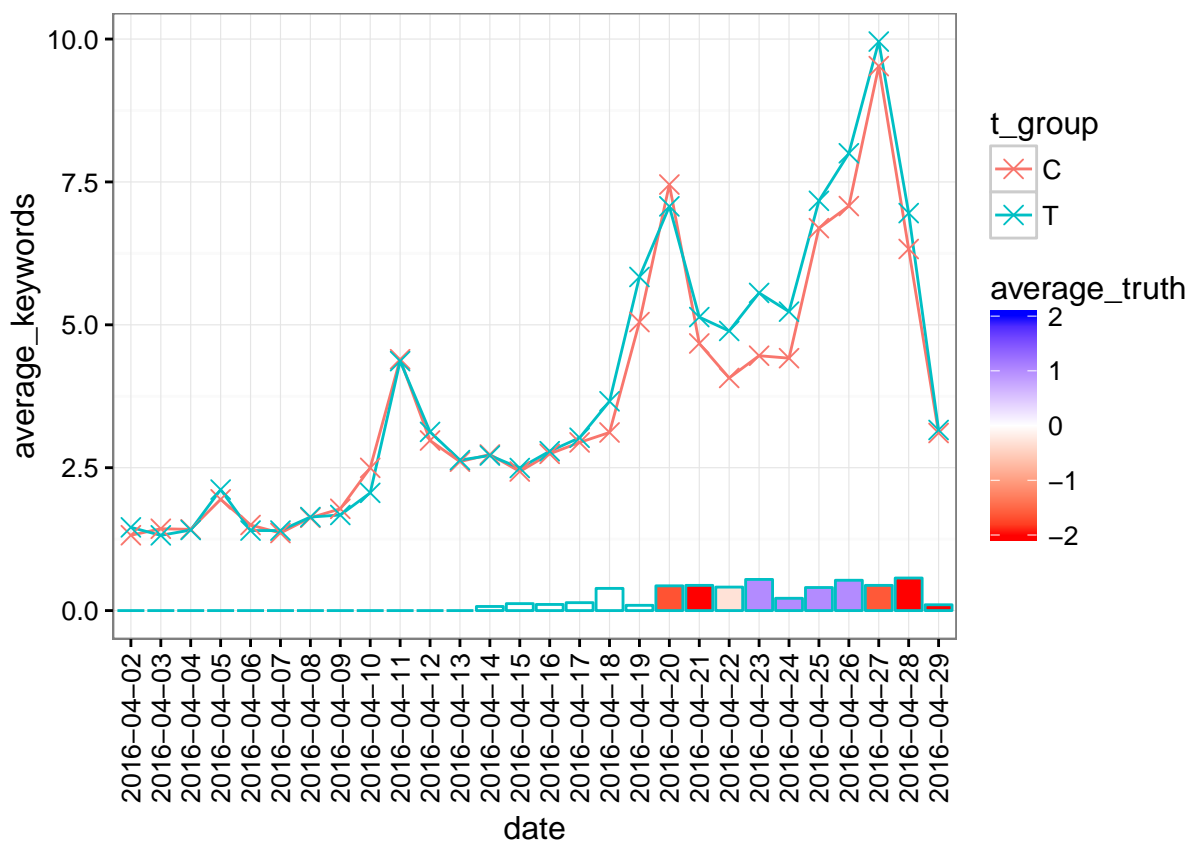


Figure 4: Average tweets containing the word Trump

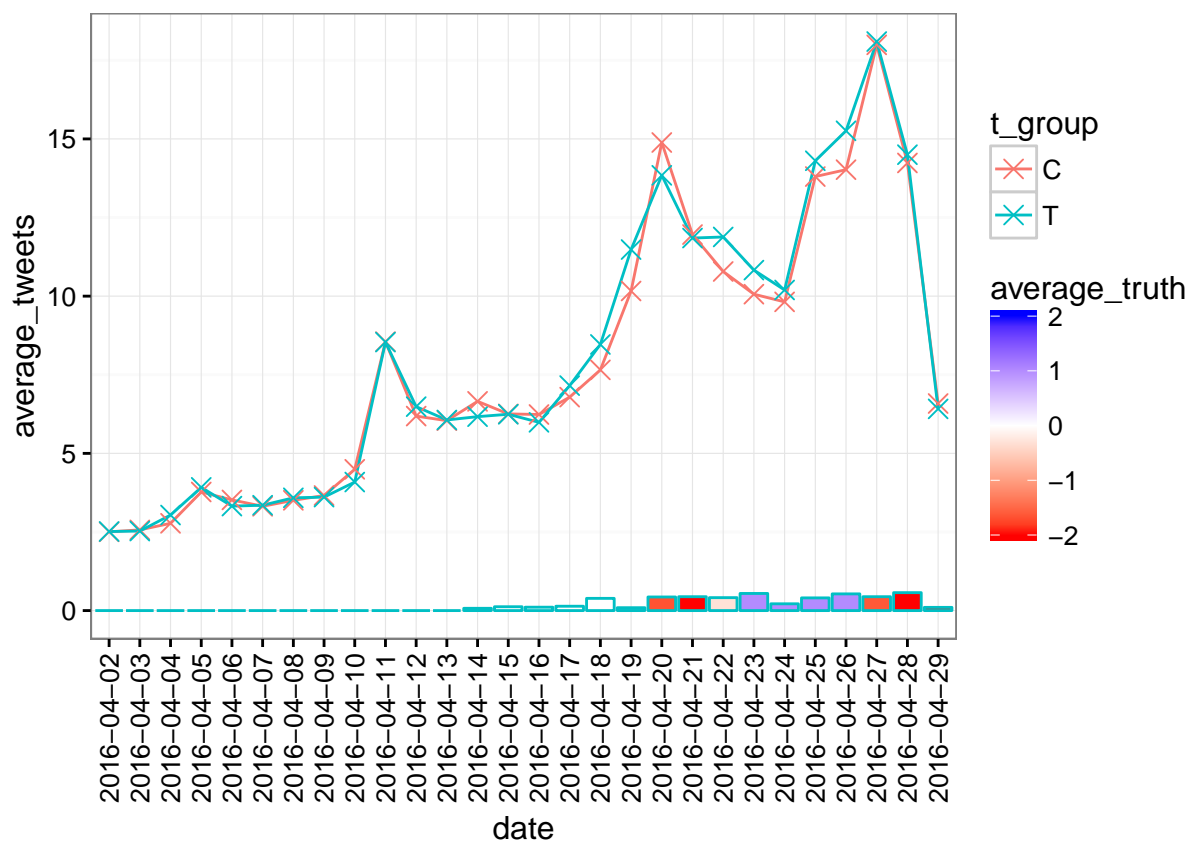


Figure 5: Average tweets



Table 5:

	<i>Dependent variable:</i>			
	like_n	trump_rt_n	MAGA_n	trump_keyword_n
	(1)	(2)	(3)	(4)
t_groupT	−0.011 (0.084)	0.040 (0.097)	0.014 (0.071)	0.138 (0.446)
t_groupT:date2016-04-03	−0.006 (0.119)	−0.062 (0.138)	−0.016 (0.100)	−0.253 (0.631)
t_groupT:date2016-04-04	0.012 (0.119)	−0.116 (0.138)	−0.019 (0.100)	−0.150 (0.631)
t_groupT:date2016-04-05	−0.007 (0.119)	−0.046 (0.138)	−0.023 (0.100)	0.032 (0.631)
t_groupT:date2016-04-06	0.007 (0.119)	−0.032 (0.138)	0.003 (0.100)	−0.235 (0.631)
t_groupT:date2016-04-07	−0.014 (0.119)	−0.019 (0.138)	−0.052 (0.100)	−0.095 (0.631)
t_groupT:date2016-04-08	0.021 (0.119)	−0.018 (0.138)	−0.028 (0.100)	−0.125 (0.631)
t_groupT:date2016-04-09	−0.013 (0.119)	−0.107 (0.138)	−0.013 (0.100)	−0.246 (0.631)
t_groupT:date2016-04-10	−0.001 (0.119)	−0.235* (0.138)	−0.054 (0.100)	−0.576 (0.631)
t_groupT:date2016-04-11	−0.049 (0.119)	0.022 (0.138)	−0.023 (0.100)	−0.172 (0.631)
t_groupT:date2016-04-12	0.021 (0.119)	0.081 (0.138)	−0.042 (0.100)	0.013 (0.631)
t_groupT:date2016-04-13	0.045 (0.119)	−0.047 (0.138)	−0.067 (0.100)	−0.111 (0.631)
t_groupT:date2016-04-14	0.005 (0.119)	0.119 (0.138)	−0.003 (0.100)	−0.156 (0.631)
t_groupT:date2016-04-15	0.023 (0.119)	−0.087 (0.138)	−0.100 (0.100)	−0.077 (0.631)
t_groupT:date2016-04-16	0.006 (0.119)	−0.133 (0.138)	−0.012 (0.100)	−0.092 (0.631)
t_groupT:date2016-04-17	0.106 (0.119)	−0.033 (0.138)	−0.084 (0.100)	−0.057 (0.631)
t_groupT:date2016-04-18	0.011 (0.119)	0.004 (0.138)	0.168* (0.100)	0.407 (0.631)
t_groupT:date2016-04-19	0.095 (0.119)	0.082 (0.138)	0.214** (0.100)	0.651 (0.631)
t_groupT:date2016-04-20	0.059 (0.118)	−0.081 (0.136)	0.160 (0.099)	−0.521 (0.625)
t_groupT:date2016-04-21	−0.060 (0.119)	0.034 (0.138)	0.098 (0.100)	0.323 (0.631)
t_groupT:date2016-04-22	−0.031 (0.119)	−0.036 (0.138)	0.083 (0.100)	0.684 (0.631)
t_groupT:date2016-04-23	−0.010 (0.119)	−0.045 (0.138)	0.038 (0.100)	0.960 (0.631)
t_groupT:date2016-04-24	0.002 (0.119)	−0.053 (0.138)	0.047 (0.100)	0.676 (0.631)
t_groupT:date2016-04-25	0.058 (0.119)	−0.025 (0.138)	−0.020 (0.100)	0.340 (0.631)
t_groupT:date2016-04-26	−0.054 (0.119)	−0.112 (0.138)	0.032 (0.100)	0.785 (0.631)
t_groupT:date2016-04-27	−0.050 (0.119)	−0.090 (0.138)	0.023 (0.100)	0.291 (0.631)
t_groupT:date2016-04-28	−0.025 (0.119)	−0.092 (0.138)	0.027 (0.100)	0.490 (0.631)
t_groupT:date2016-04-29	0.025 (0.119)	−0.031 (0.138)	−0.007 (0.100)	−0.085 (0.631)
Constant	0.155*** (0.040)	0.302*** (0.046)	0.089*** (0.034)	1.318*** (0.211)
Observations	105,076	105,076	105,076	105,076
R <sup>2</sup>	0.094	0.020	0.015	0.035
Adjusted R <sup>2</sup>	0.093	0.020	0.014	0.034
Residual Std. Error (df = 105020)	2.142	2.483	1.809	11.384
F Statistic (df = 55; 105020)	197.269***	39.337***	28.147***	69.003***

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01