Preliminary Results

Group 3

April 25, 2016

The data in this document were pulled from a database on May 11 2016 at 10:24. 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

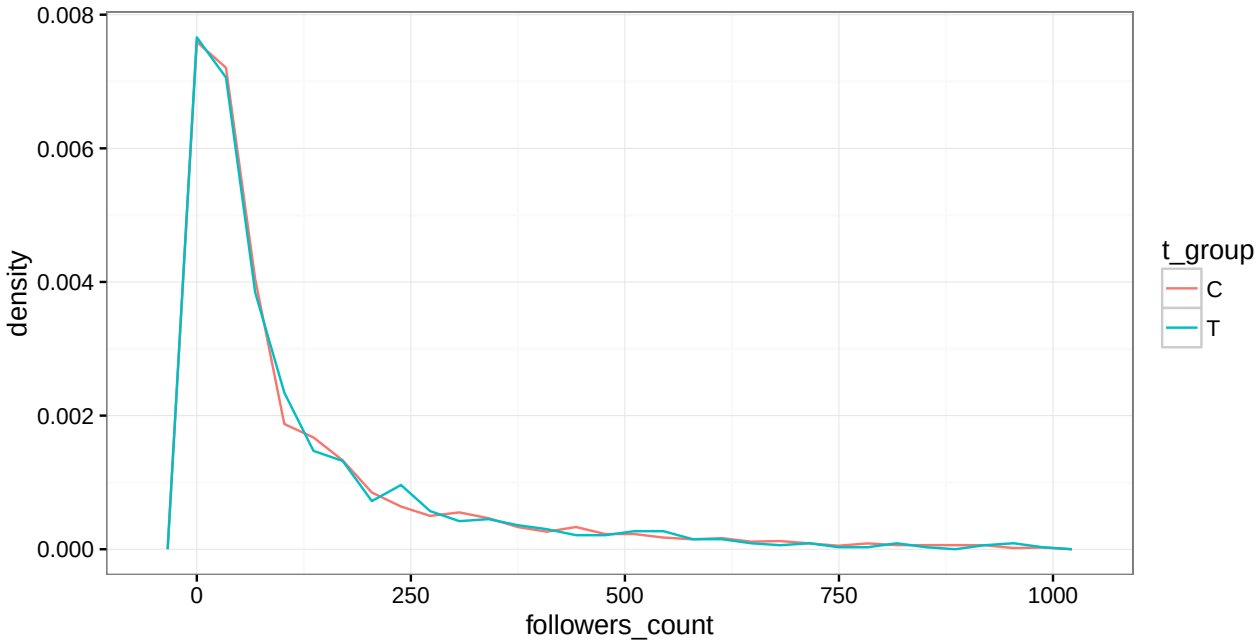
We show summary statistics for the treatment and control groups in the period before the treatment started, and plot frequency density plots of followers and friends counts.

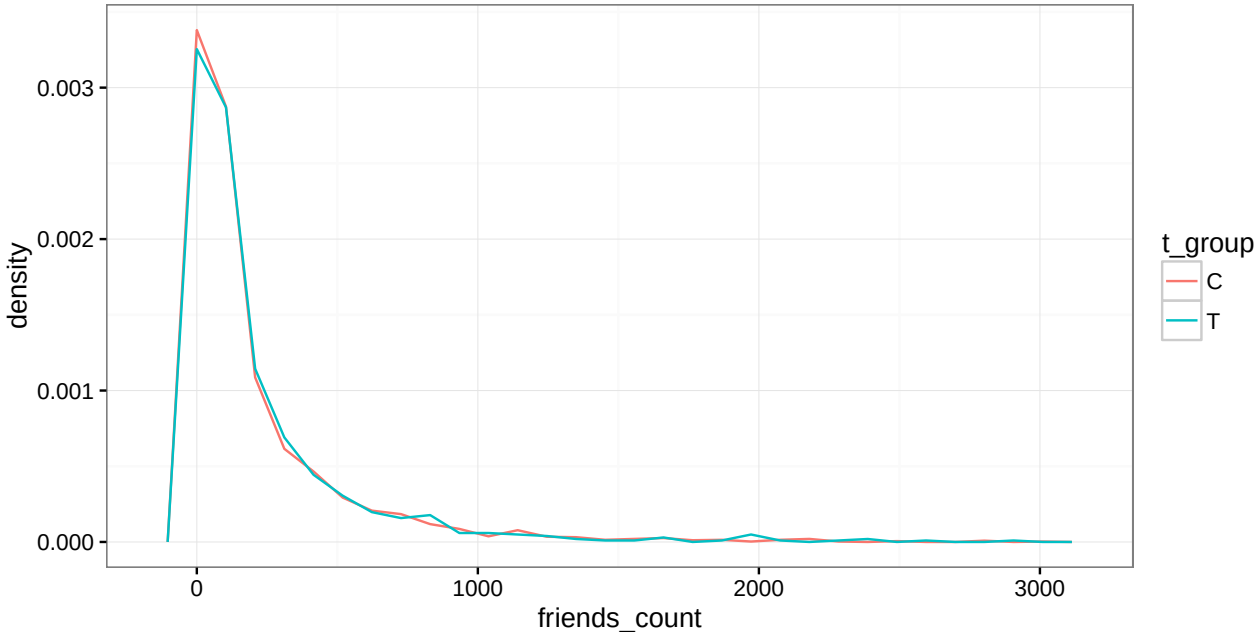
Table 1: Summary statistics - treatment group

variable	mean	median	SE
average_keywords	2.4083832	0.8571429	0.1310748
average_likes	0.5632164	0.1428571	0.0333547
average_MAGA	0.1849444	0.0000000	0.0150037
average_mentions	1.4001711	0.5714286	0.0871025
average_rts	0.5828914	0.0000000	0.0613028
followers_count	114.0674847	52.0000000	5.4760813
friends_count	205.2503067	92.0000000	11.2021672

Table 2: Summary statistics - control group

variable	mean	median	SE
average_keywords	2.4469715	0.8571429	0.0755602
average_likes	0.5699156	0.1428571	0.0182921
average_MAGA	0.2132852	0.0000000	0.0103181
average_mentions	1.4190053	0.5714286	0.0473425
average_rts	0.5893406	0.0000000	0.0327970
followers_count	121.1595819	55.0000000	3.0626076
friends_count	211.4254355	94.0000000	5.8682976





The map in figure [#] shows the distribution of the self-reported location of our observation group around the US (note that not all users report their location, not all users truthfully report their location, and not all locations are necessarily geocoded correctly)

Treatment

Table [#] gives examples of the tweets we sent to our treatment group

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

Figure 1: Location of observation group

Tweet number	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
7	@LostinMemphis Trump says he fully opposed war in Iraq arguing for years it would destabilize the Middle East - false says Politifact	-2	2016-04-30

Table 3: Example tweets

are colour coded according to the schema in table [#]

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

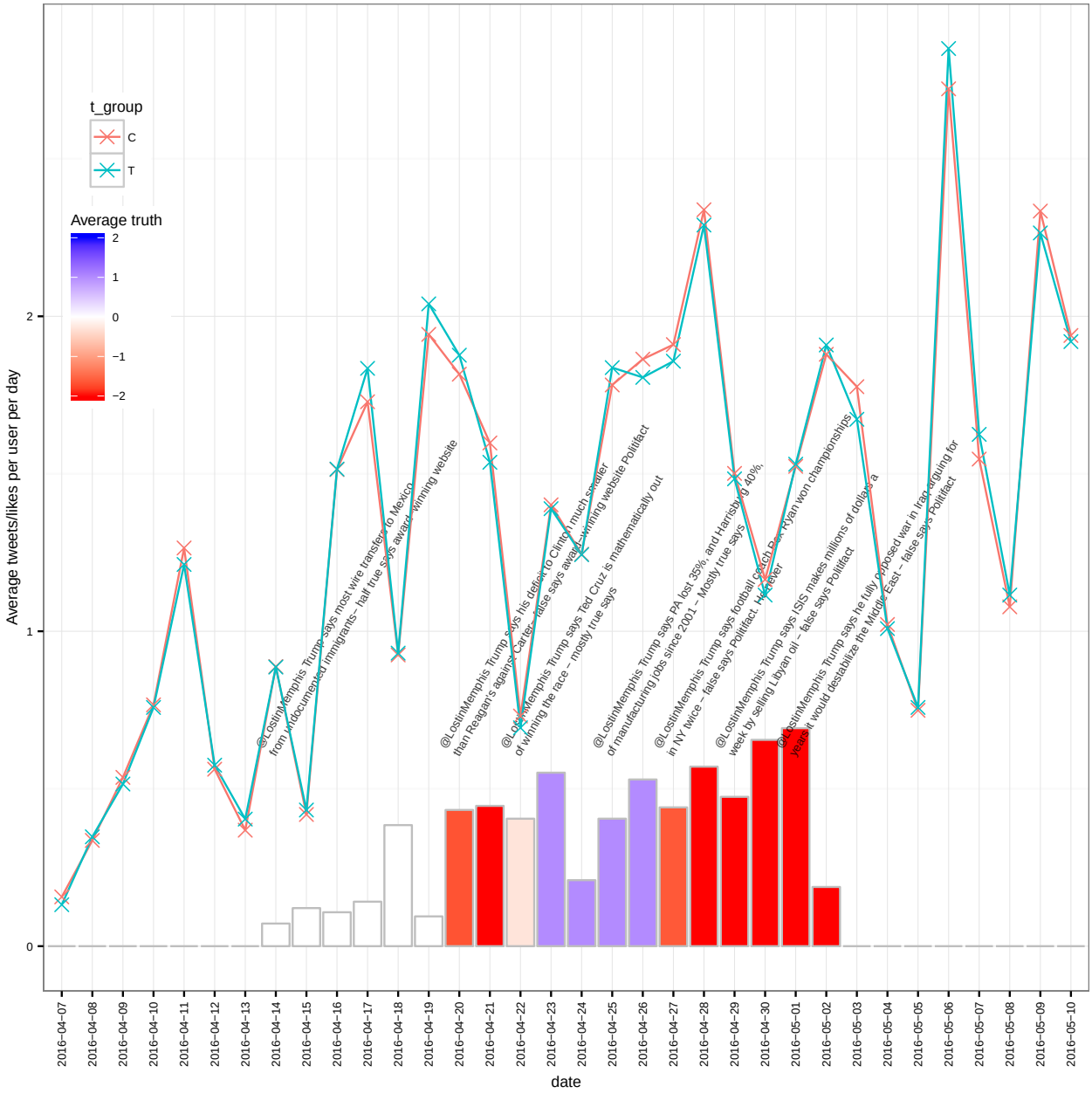


Figure 2: Average likes of Trump tweets

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 in figures [#] to [#]

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.

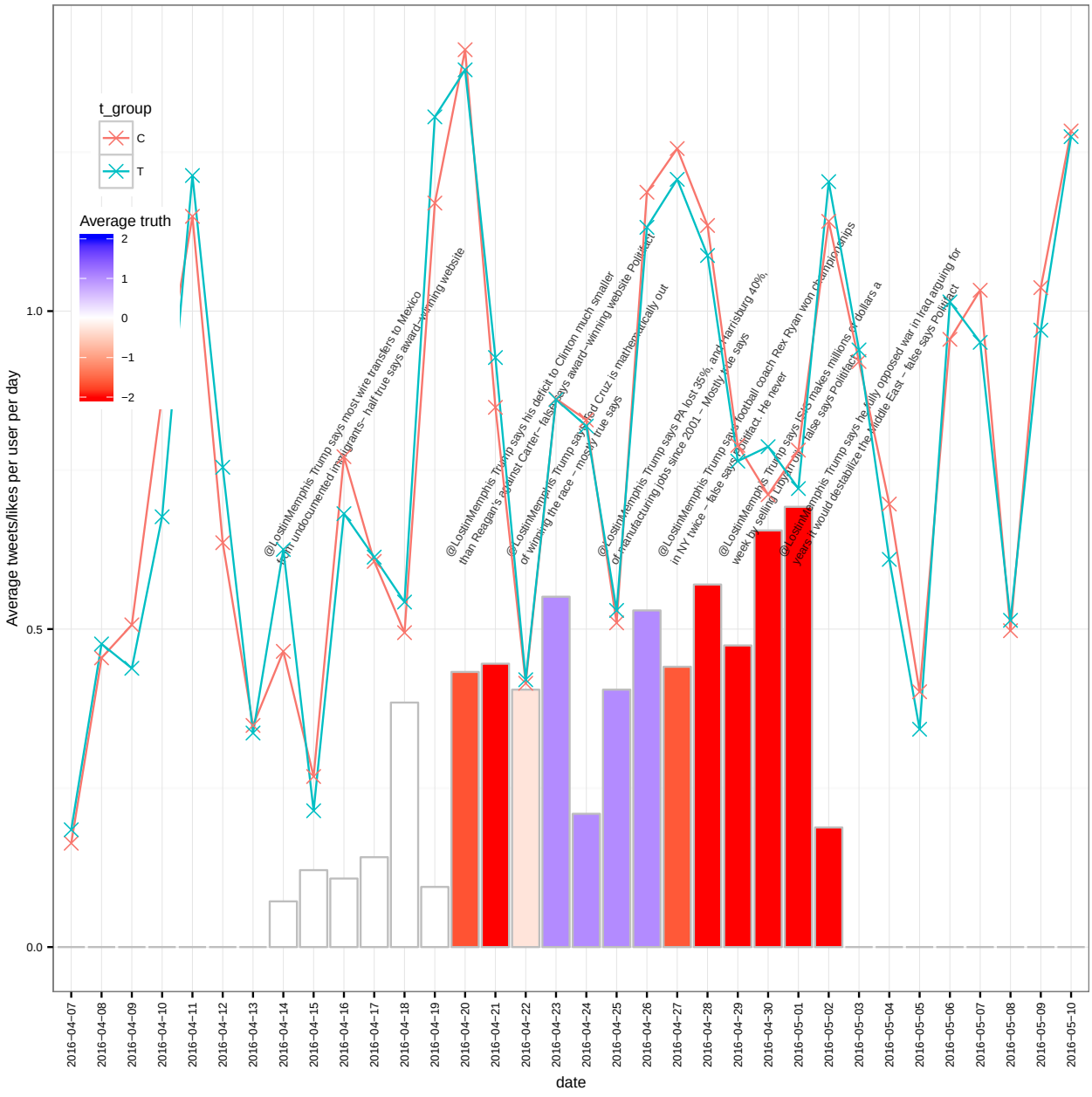


Figure 3: Average retweets of Trump

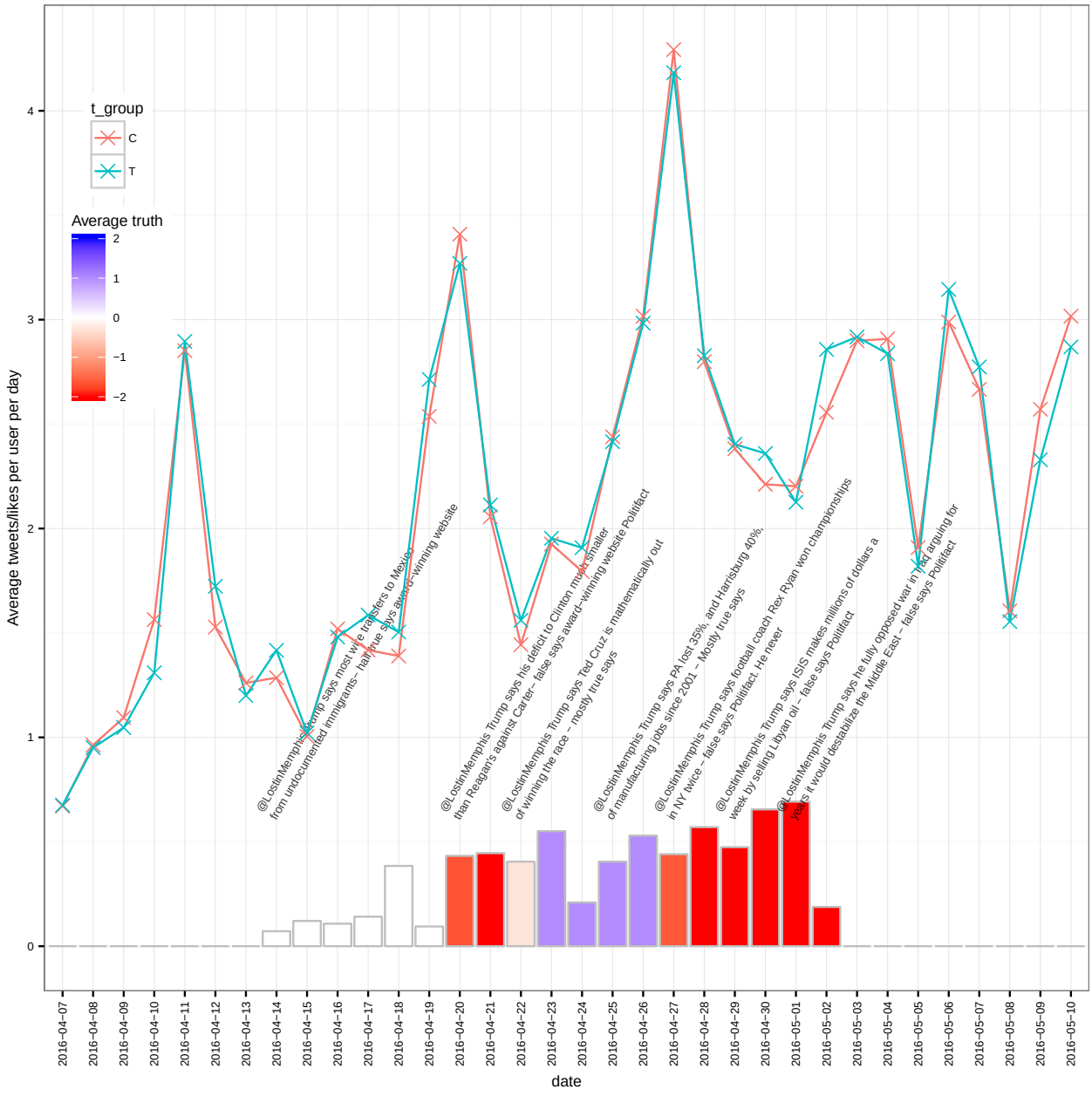


Figure 4: Averages tweets containing @RealDonaldTrump

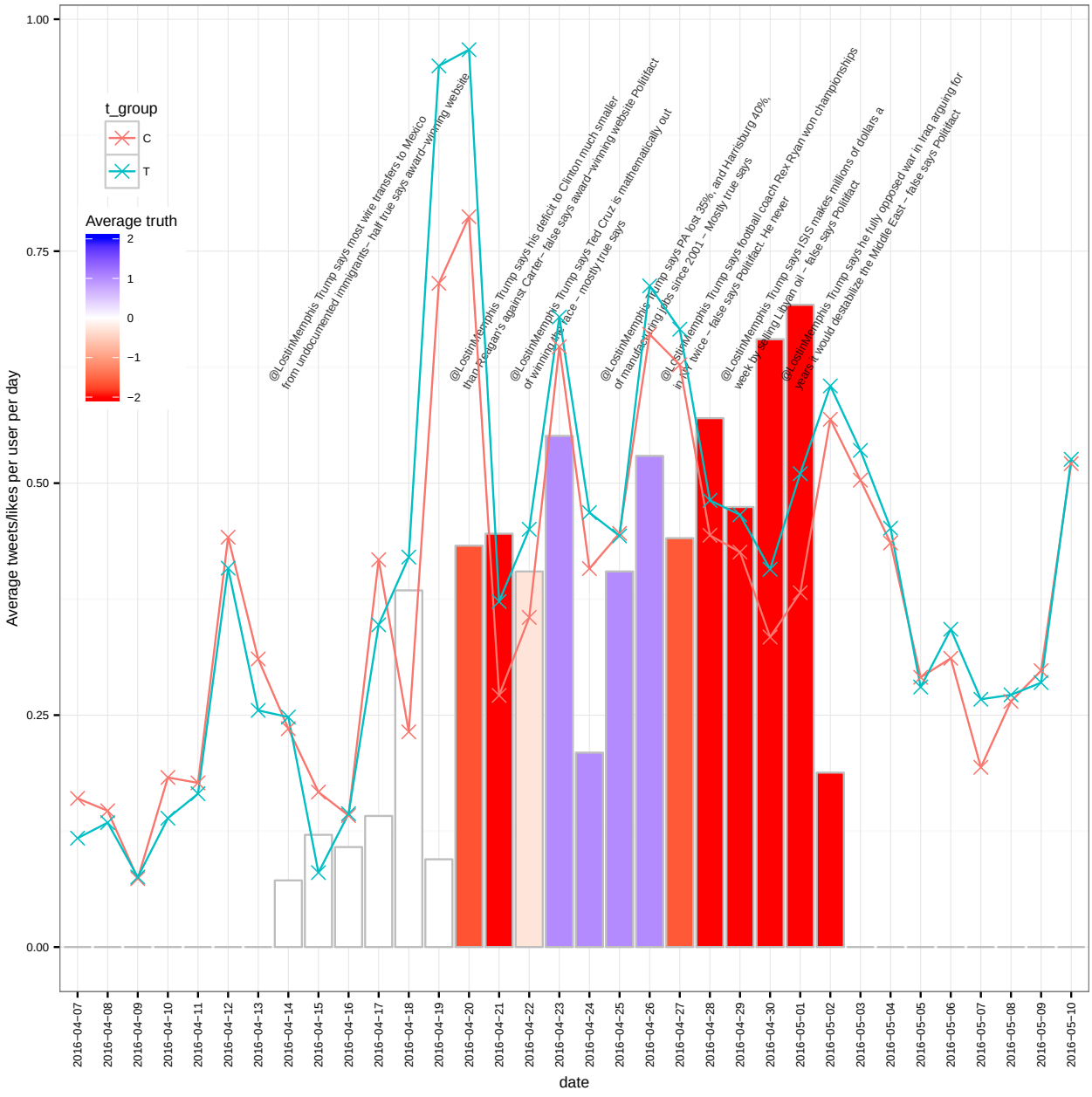


Figure 5: Average tweets using the hashtag #MakeAmericaGreatAgain

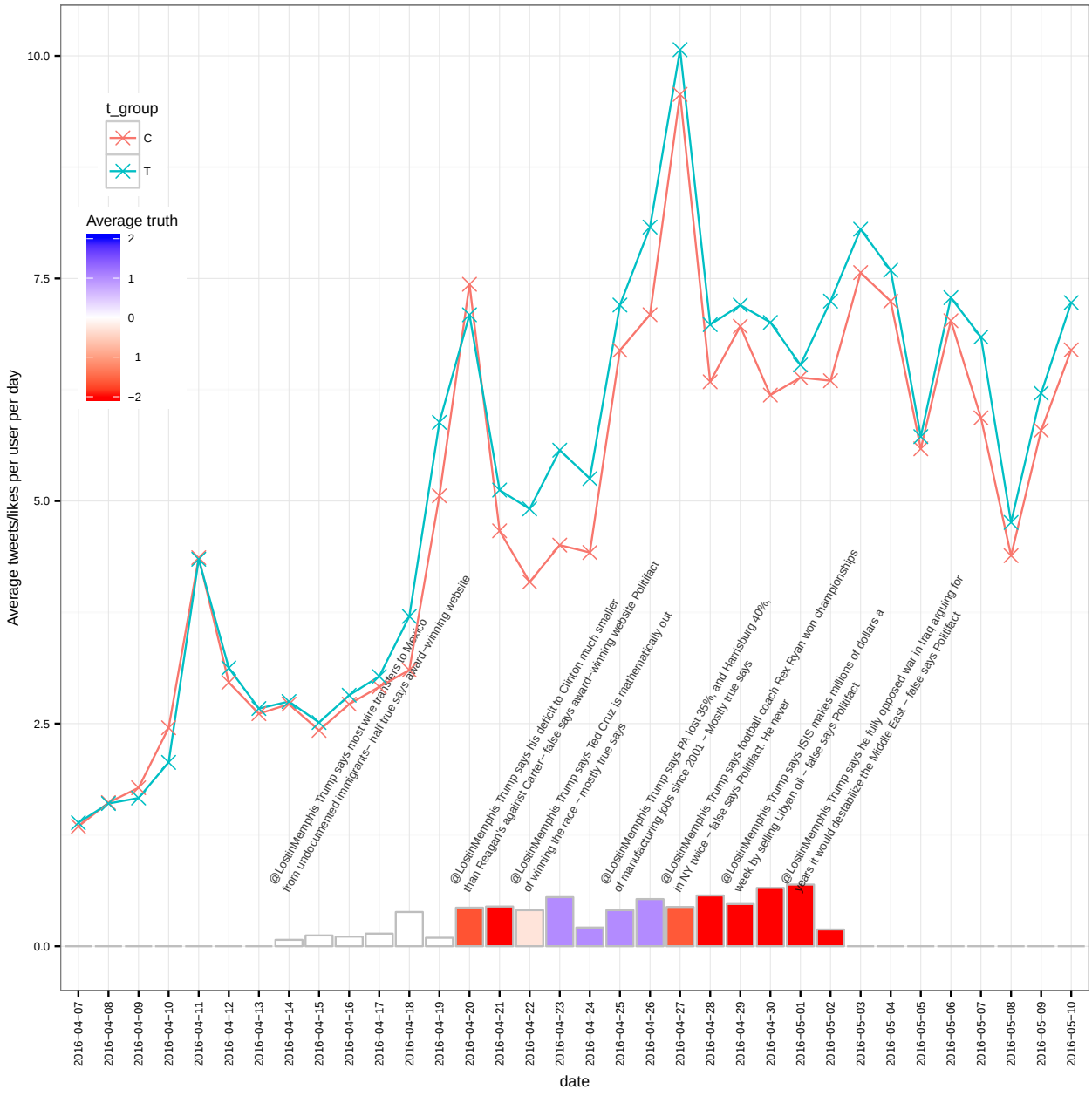


Figure 6: Average tweets containing the word Trump

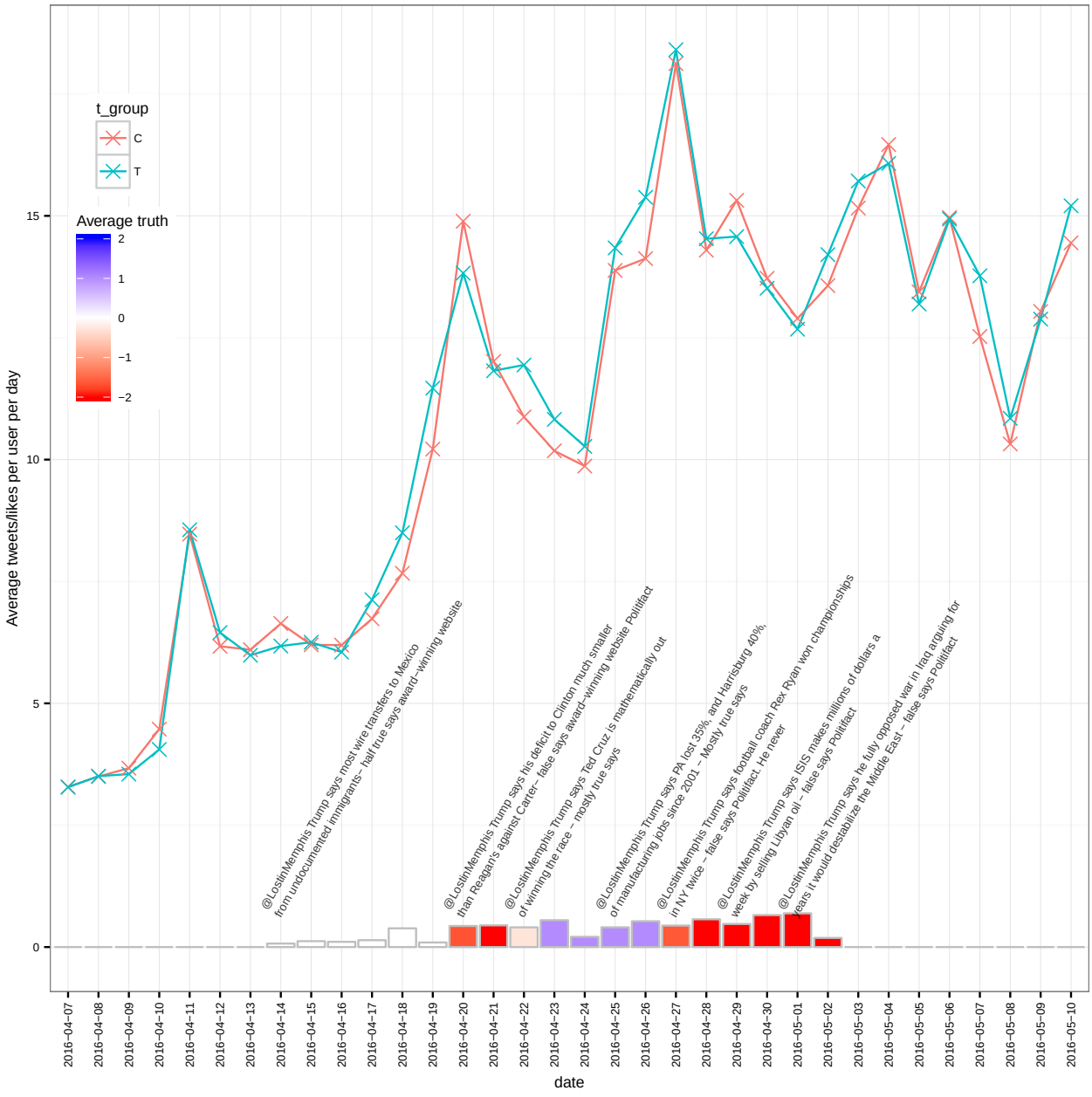


Figure 7: Average tweets

Table 5:

	Dependent variable:			
	like_n	trump_rt_n	MAGA_n	trump_keyword_n
	(1)	(2)	(3)	(4)
t_groupT	−0.025 (0.103)	0.021 (0.099)	−0.043 (0.075)	0.041 (0.565)
t_groupT:date2016-04-08	0.036 (0.146)	0.001 (0.140)	0.030 (0.105)	−0.052 (0.799)
t_groupT:date2016-04-09	0.004 (0.146)	−0.089 (0.140)	0.045 (0.105)	−0.156 (0.799)
t_groupT:date2016-04-10	0.017 (0.146)	−0.212 (0.140)	−0.001 (0.105)	−0.430 (0.799)
t_groupT:date2016-04-11	−0.028 (0.146)	0.043 (0.140)	0.031 (0.105)	−0.060 (0.799)
t_groupT:date2016-04-12	0.038 (0.146)	0.098 (0.140)	0.010 (0.105)	0.121 (0.799)
t_groupT:date2016-04-13	0.060 (0.146)	−0.033 (0.140)	−0.013 (0.105)	0.017 (0.799)
t_groupT:date2016-04-14	0.023 (0.146)	0.139 (0.140)	0.055 (0.105)	−0.011 (0.799)
t_groupT:date2016-04-15	0.039 (0.146)	−0.075 (0.140)	−0.044 (0.105)	0.048 (0.799)
t_groupT:date2016-04-16	0.026 (0.146)	−0.111 (0.140)	0.045 (0.105)	0.059 (0.799)
t_groupT:date2016-04-17	0.131 (0.146)	−0.014 (0.140)	−0.027 (0.105)	0.075 (0.799)
t_groupT:date2016-04-18	0.030 (0.146)	0.027 (0.140)	0.231** (0.105)	0.561 (0.799)
t_groupT:date2016-04-19	0.122 (0.146)	0.114 (0.140)	0.277*** (0.105)	0.784 (0.799)
t_groupT:date2016-04-20	0.085 (0.144)	−0.053 (0.139)	0.223** (0.104)	−0.384 (0.790)
t_groupT:date2016-04-21	−0.037 (0.146)	0.057 (0.140)	0.144 (0.105)	0.417 (0.799)
t_groupT:date2016-04-22	−0.013 (0.146)	−0.016 (0.140)	0.138 (0.105)	0.779 (0.799)
t_groupT:date2016-04-23	0.013 (0.146)	−0.022 (0.140)	0.075 (0.105)	1.025 (0.799)
t_groupT:date2016-04-24	0.023 (0.146)	−0.031 (0.140)	0.103 (0.105)	0.790 (0.799)
t_groupT:date2016-04-25	0.080 (0.146)	−0.002 (0.140)	0.040 (0.105)	0.466 (0.799)
t_groupT:date2016-04-26	−0.033 (0.146)	−0.076 (0.140)	0.095 (0.105)	0.943 (0.799)
t_groupT:date2016-04-27	−0.028 (0.146)	−0.069 (0.140)	0.081 (0.105)	0.461 (0.799)
t_groupT:date2016-04-28	−0.024 (0.146)	−0.068 (0.140)	0.081 (0.105)	0.601 (0.799)
t_groupT:date2016-04-29	0.007 (0.146)	−0.046 (0.140)	0.083 (0.105)	0.196 (0.799)
t_groupT:date2016-04-30	−0.025 (0.146)	0.054 (0.140)	0.116 (0.105)	0.775 (0.799)
t_groupT:date2016-05-01	0.032 (0.146)	−0.082 (0.140)	0.171 (0.105)	0.100 (0.799)
t_groupT:date2016-05-02	0.054 (0.146)	0.041 (0.140)	0.079 (0.105)	0.853 (0.799)
t_groupT:date2016-05-03	−0.079 (0.146)	−0.003 (0.140)	0.075 (0.105)	0.446 (0.799)
t_groupT:date2016-05-04	0.012 (0.146)	−0.108 (0.140)	0.059 (0.105)	0.307 (0.799)
t_groupT:date2016-05-05	0.034 (0.146)	−0.080 (0.140)	0.032 (0.105)	0.096 (0.799)
t_groupT:date2016-05-06	0.153 (0.146)	0.038 (0.140)	0.074 (0.105)	0.217 (0.799)
t_groupT:date2016-05-07	0.103 (0.146)	−0.103 (0.140)	0.116 (0.105)	0.866 (0.799)
t_groupT:date2016-05-08	0.062 (0.146)	−0.005 (0.140)	0.050 (0.105)	0.331 (0.799)
t_groupT:date2016-05-09	−0.045 (0.146)	−0.088 (0.140)	0.030 (0.105)	0.376 (0.799)
t_groupT:date2016-05-10	0.005 (0.146)	−0.030 (0.140)	0.048 (0.105)	0.490 (0.799)
Constant	0.156*** (0.049)	0.163*** (0.047)	0.160*** (0.035)	1.345*** (0.266)
Observations	127,956	127,956	127,956	127,956
R^2	0.055	0.016	0.010	0.021
Adjusted R^2	0.054	0.015	0.009	0.020
Residual Std. Error (df = 127888)	2.629	2.523	1.901	14.399
F Statistic (df = 67; 127888)	110.858***	30.747***	18.936***	40.768***

Note: *p<0.1; **p<0.05; ***p<0.01