On-Line Supplemental Appendix for Kropf, Martha. Using Campaign Communications to Analyze Civility in Ranked Choice Voting Elections.

Table A-1: Comparisons of RCV and Plurality Matches

This table is borrowed directly from Donovan, Todd, Tolbert, Caroline, & Gracey, Kellen. (2016). Campaign civility under preferential and plurality voting. *Electoral Studies*, 42(2016): 157-163. https://doi.org/10.1016/j.electstud.2016.02.009. Table numbers are percent in each category. The difference is that the cities Spokane, WA and Madison, WI are added, as specified in the Kropf manuscript.

	Minneapolis	**Seattle**	**Boston**	**Tulsa**	
% Obama '08	80	85	80	52	
% Dem Sen '10	79	82	73	n/a	
White VAP	68	69	52	63	
Black VAP	15	8	20	15	
Hispanic VAP	8	6	15	12	
Asian VAP	5	14	10	2	
	St. Paul	**Des Moines**	**Cedar Rapids**	**Madison**	**Spokane**
% Obama '08	75	67	64	80	56
% Dem Sen '10	74	n/a	n/a	79	52
White VAP	65	76	89	85	88
Black VAP	13	9	4	6	2
Hispanic VAP	8	9	3	4	4
Asian VAP	12	4	2	3	2
	Cambridge	**Lowell**	**Worchester**		
% Obama '08	87	68	68		
% Dem Sen '10	86	n/a	n/a		
White VAP	65	59	65		
Black VAP	10	5	9		
Hispanic VAP	7	14	17		
Asian VAP	15	18	6		

Table A-2: Minneapolis, MN Candidate Tweets During 2013 (Mayor's Race)[1]

Candidate	Tweets During 2013	Tweets from August 1, 2013-November 30, 2013
Betsy Hodges (winner)	2,762	1,715
Cam Winton	1155	762
Don Samuels	497	289
Mark Andrews	1291	788
Jackie Cherryhomes	1052	663
Stephanie Woodruff	1095	688
Christopher Robin Zimmer	2480	1109
Jeffrey Alan Wagner	5	5
Troy Benjegerdes	3	3
Doug Mann	9	5
Bill Kahn	9	7
Gregg A. Iverson[2]	1	1

Table A-3: Boston Candidate Tweets During 2013 Mayor's Race[3]

Candidate	Tweets During 2013	Election Tweets *General: July 1-November 30 Primary: July 1-September 30*
Marty Walsh (elected mayor)	1,772	1,269
John R. Connolly (advanced to general election)	1,673	956
Felix G. Arroyo	2,341	927
John Barros	702	403
Charles Clemons	2,021	1,061
Daniel F. Conley	584	275
Charlotte Golar Richie	971	654
Bill Walczak	531	372
Charles Yancey	258	60

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[1] In searching for Twitter accounts, the following candidates did not appear to have an account during the time period of the election: Mark V. Anderson, Merrill Anderson, Neal Baxter, Alicia K. Bennett (wrote two tweets during time period), Bob "Again" Carney, Jr., Christopher Clark, Dan Cohen, James Everett, Bob Fine, Cyd Gorman, Mike Gould, Kurtis W. Hanna, John Leslie Hartwig, Jaymie Kelly, Tony Lane, Abdul M. Rahaman, Joshua Rea, Ole Savior, Captain Jack Sparrow, James "Jimmy" L. Stroud, John Charles Wilson, Rahn V. Workcuff, and Christopher Robin Zimmerman.

[2] Iverson is excluded from the analysis below because he sent one tweet that was saying "hi" to another candidate, Jeffrey Alan Wagner (@PissedOffmpls).

[3] In searching for Twitter feeds, the following Boston mayoral candidates did not appear to have a Twitter Account or did not tweet during the period of the election: Robert Consalvo, Michael P. Ross, and David James Wyatt.

Table A-4: Seattle Candidate Tweets During 2013 Mayor's Race[4]

Candidate	Tweets During 2013	Election Tweets *General: June 1-November 30 Primary: June 1-August 30*
Ed Murray (elected mayor)	338	284
Michael McGinn (advanced to general election)	1,366	586
Bruce Harrell	62	27
Charlie Staadecker	24	8
Peter Steinbrueck	156	48

Table A-5: Tulsa Candidate Tweets During 2013 Mayor's Race[5]

Candidate	Tweets During 2013	Election Tweets *General: April 1, 2013-November 30, 2013 Primary: Eliminated candidate did not have Twitter Account*
Dewey Bartlett (elected mayor)[6]	@DeweyBartlett 253 @MayorBartlett 46	179 30
Kathy Taylor (advanced to general election)	1085	851

Table A-6: St. Paul, MN City Council 1st Ward Candidate Tweets During 2013[7]

Candidate	Tweets During 2013	Tweets from August 1, 2013-November 30, 2013
Dai Thao	92	62
Kazoua Kong-Thao	17	3
Noel Nix	241	93

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[4] In searching for Twitter feeds, the following Boston mayoral candidates did not appear to have a Twitter Account or did not tweet during the period of the election: Robert Consalvo, Michael P. Ross, and David James Wyatt.

[5] In searching for Twitter feeds, the following Tulsa mayoral candidate did not appear to have a Twitter Account or did not tweet during the period of the election: Bill Christiansen.

[6] Dewey Bartlett appears to have a third Twitter handle (@MayorTulsa), but upon closer inspection, it was so negative, that I determined it was probably not the incumbent mayor.

[7] In searching for Twitter accounts, the following St. Paul City Council 1st Ward candidates did not appear to have one: Johnny Howard, Debbie Montgomery, Mark Voerding, and Paul Holmgren.

Table A-7: Spokane, Washington City Council 2st Ward Candidate Tweets During 2013[8]

Candidate	Tweets During 2013	Tweets from August 1, 2013-November 30, 2013
John Ahern	20	13

Table A-8: Madison, Wisconsin 1st District City Council Race Candidate Tweets During 2013[9]

Candidate	Tweets During 2013	Tweets from February 1, 2013-April 30, 2013
Lisa Subeck	126	5[10]

Table A-9: Cambridge, MA Candidate Tweets During 2013 (City Council)[11]

Candidate	Tweets During 2013	Tweets from August 1, 2013-November 30, 2013
Dennis Benzan[12]	312	241
Dennis Carlone	4	4
Leland Cheung	431	158
Janneke House	600	290
Craig A. Kelley	39	**30**
Logan E. Leslie[13]	2	**0**
David P. Maher	24	**22**
Nadeem Mazen	293	**95**
Marc C. McGovern	341	**133**
Sam Seidel	32	**32**

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[8] In searching for Twitter accounts, the other candidate from Madison, John Snyder, did not appear to have a Twitter account or tweet during the campaign period.

[9] The other candidate Philip Alan Sigurslid did not appear to have a Twitter account or tweet during the campaign period.

[10] The tweets were all written immediately after April 2 which was Election Day.

[11] In search for Twitter accounts, the following Cambridge, MA candidates did not appear to have one: James Lee (there were so many James Lees in the list that the researcher acknowledges one could have been missed), Gary W. Mello, Mushtaque Mirza (actually had an account but had not tweeted), Gregg J. Moree, Ron Peden, Lesley Phillips, Kenneth E. Reeves, Jefferson Smith, Minka Y. vanBeuzekom, Kristen von Hoffmann (did not as of the time of the election), James M. Williamson, Elie Yarden (there was an "Elie Yarden" with an account but no tweets).

[12] Note that seven Tweets from Benzan (mostly re-tweets) were in Spanish—there is a Spanish dictionary included with the LIWC program. Rather than dividing the tweets into two parts (and having to keep them separate), I have chosen to translate the tweets into English. For example, the tweet: "Primer latino en Concejo Municipal" is translated to "First Latino on the City Council."

[13] This candidate is excluded from the analysis below because he did not Tweet much and none during the bulk of the campaign period.

E. Denise Simmons	912	**312**
Timothy J. Toomey, Jr.	314	**102**
Luis Vasquez[14]	822	**269**

Table A-10: Worcester, MA City Council Candidate Tweets During 2013[15]

Candidate	Tweets During 2013	Tweets from August 1, 2013-November 30, 2013
Mesfin Beshir	1,471	563
Joseph M. Petty	42	25
Kate Toomey	362	102

Table A-11: Lowell, MA City Council Candidate Tweets During 2013[16]

Candidate	Tweets During 2013	Tweets from July 1, 2013-November 30, 2013
Stacie Hargis (advanced to general election)	177	163
Vesna Nuon (advanced to general election)	66	38
Rick D. Misitano (Did not advance)	87	66
Brandon Wynn Navom (did not advance)	21	21
Matthew J. Vieira (did not advance)	56	27

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[14] One half English, half Spanish tweet is translated here: "Que Rico" is translated to "how delicious!"

[15] Nine other candidates did not have Twitter accounts: Morris A. Bergman, Konstantina B. Lukes, Rick Rushton, Michael T. Gaffney, Michael J. Germain, Bill Coleman, Peter C. Kush, Carmen L. Carmona and William Feegbeh.

[16] Several candidates in Worcester did not appear to tweet: Rita M. Mercier, Rodney M. Elliot, William F. Martin, Jr., Daniel P. Rourke, Edward J. Kennedy, Jr., James L. Milanazzo, William Samaras, John J. Leahy, Martin "Marty" Lorrey, Joseph M. Medonca, Corey A. Belanger, Erik R. Gitshier, Derek A. Mitchell, Vandoeun Pech, Genevieve K. Koyle, Frederick J. Doyle (F. Doyle had an account, but had not tweeted since 2009), and Darius L. Mitchell.

Table A-12: LIWC Analysis of Individual Candidate Tweets (Minneapolis)

(Table cells are percentage of total text in the tweets)

Affective	Positive	Negative	Anger	Anxiety	
Betsy Hodges	4.84	0.77	0.30	0.12	
Cam Winton	5.03	0.89	0.29	0.07	
Don Samuels	4.39	0.66	0.17	0.16	
Mark Andrews	6.11	0.34	0.12	0.01	
Jackie Cherryhomes	4.61	0.44	0.09	0.05 .	
Stephanie Woodruff	5.13	0.79	0.18	0.12	
Christopher Robin Zimmer	3.26	1.56	0.55	0.15	
Jeffrey Alan Wagner[17]	0.94	0.94	0.00	0.94	
Troy Benjegerdes	3.45	1.72	0.00	0.00	
Doug Mann	0.85	0.00	0.00	0.00	
Bill Kahn	2.90	0.00	0.00	0.00	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Betsy Hodges	1.09	1.03	7.89	3.00	1.10
Cam Winton	1.44	1.15	6.82	2.59	1.64
Don Samuels	0.76	1.25	6.95	2.08	0.96
Mark Andrews	0.63	0.88	7.86	3.07	0.46
Jackie Cherryhomes	0.77	0.95	8.06	4.02	0.97
Stephanie Woodruff	0.89	1.09	7.62	2.98	1.42
Christopher Robin Zimmer	2.01	1.30	6.82	1.88	2.12
Jeffrey Alan Wagner[18]	1.89	0.94	7.55	1.89	0.94

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[17] Those with a much smaller number of Tweets should be interpreted with great caution. This candidate and others are included in the aggregated tweets and here for purposes of disclosure in the on-line appendix.

[18] Those with a much smaller number of Tweets should be interpreted with great caution. This candidate and others are included in the aggregated tweets and here for purposes of disclosure in the on-line appendix.

Troy Benjegerdes	3.45	1.72	8.62	5.17	1.72
Doug Mann	0.00	0.00	5.08	0.85	0.00
Bill Kahn	2.17	0.72	10.87	2.90	2.90

Table A-13: LIWC Analysis of Individual Candidate Tweets (Boston)

(Table cells are percentage of total text in the tweets)

Affective	Positive	Negative	Anger	Anxiety	
Marty Walsh (elected mayor)	6.13	0.32	0.14	0.04	
John R. Connolly (advanced to general election)	5.87	0.39	0.09	0.07	
Felix G. Arroyo	6.05	0.32	0.08	0.04	
John Barros	5.18	0.28	0.15	0.03	
Charles Clemons	3.68	1.32	0.62	0.11	
Daniel F. Conley	8.03	0.13	0.09	0.02	
Charlotte Golar Richie	5.39	0.27	0.08	0.01	
Bill Walczak	4.62	0.25	0.05	0.04	
Charles Yancey	5.48	0.31	0.10	0.10	
Cognitive Process	Tentative	Certainty	Social	Inclusive	Exclusive
Marty Walsh (elected mayor)	0.65	0.75	7.82	2.91	0.42
John R. Connolly (advanced to general election)	0.77	0.78	7.96	2.98	0.84
Felix G. Arroyo	0.74	0.61	8.78	1.86	0.57
John Barros	0.59	0.56	8.48	3.21	0.42

Charles Clemons	1.00	0.84	6.66	1.86	2.24
Daniel F. Conley	0.69	0.89	7.02	2.06	0.47
Charlotte Golar Richie	0.46	0.67	7.19	2.46	0.43
Bill Walczak	0.70	0.69	6.30	2.70	0.44
Charles Yancey	0.83	1.24	8.58	2.07	0.83

Table A-14: LIWC Analysis of Individual Candidate Tweets (Seattle)

(Table cells are percentage of total text in the tweets)

Affective	**Positive**	**Negative**	**Anger**	**Anxiety**	
Ed Murray (elected mayor)	4.99	0.40	0.19	0.04	
Michael McGinn (advanced to general election)	3.47	0.79	0.31	0.09	
Bruce Harrell	3.66	0.20	0.00	0.20	
Charlie Staadecker	5.26	0.0	0.00	0.00	
Peter Steinbrueck	3.36	1.00	0.50	0.00	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Ed Murray (elected mayor)	0.57	0.76	8.54	3.13	0.91
Michael McGinn (advanced to general election)	0.67	0.59	6.85	3.34	0.62
Bruce Harrell	0.0	0.41	7.52	1.83	0.20
Charlie Staadecker	5.26	0.75	8.27	4.51	0.75

Peter Steinbrueck	0.62	0.37	3.99	2.12	0.12

Table A-15: LIWC Analysis of Individual Candidate Tweets (Tulsa)

(Table cells are percentage of total text in the tweets)

Affective	**Positive**	**Negative**	**Anger**	**Anxiety**	
Dewey Bartlett (elected mayor)[19]	5.03 3.76	0.53 1.41	0.16 0.47	0.10 0.31	
Kathy Taylor (advanced to general election)	5.27	0.83	0.30	0.11	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Dewey Bartlett (elected mayor)	0.67 1.25	0.61 0.16	8.50 4.23	2.90 3.60	0.69 0.94
Kathy Taylor (advanced to general election)	1.28	0.96	8.45	2.78	1.12

Table A-16: LIWC Analysis of Individual Candidate Tweets (St. Paul)

(Table cells are percentage of total text in the tweets)

Affective	**Positive**	**Negative**	**Anger**	**Anxiety**	
Dai Thao	4.86	0.30	0.15	0.0	
Kazoua Kong-Thao	8.77	0.00	0.00	0.00	
Noel Nix	5.21	0.67	0.07	0.07	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Dai Thao	1.67	0.38	10.56	6.16	1.22
Kazoua Kong-Thao	0.00	1.75	15.79	7.02	0.00

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[19] Note that there were two Dewey Bartlett accounts.

Noel Nix	1.20	0.80	7.68	3.47	1.00

Table A-17: LIWC Analysis of Individual Candidate Tweets (Spokane, Ward 2)

(Table cells are percentage of total text in the tweets)

Affective	**Positive**	**Negative**	**Anger**	**Anxiety**	
John Ahern	4.38	0.00	0.00	0.00	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
John Ahern	1.09	0.73	7.69	1.28	0.00

Table A-18: LIWC Analysis of Individual Candidate Tweets (Madison, District 1)

(Table cells are percentage of total text in the tweets)

Affective	**Positive**	**Negative**	**Anger**	**Anxiety**	
Lisa Subeck	3.85	0.00	0.00	0.00	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Lisa Subeck	0.00	0.00	7.69	1.28	0.00

Table A-19: LIWC Analysis of Individual Candidate Tweets (Cambridge, At-Large City Council)

(Table cells are percentage of total text in the tweets)

Affective	**Positive**	**Negative**	**Anger**	**Anxiety**	
Dennis Benzan	5.38	0.24	0.04	0.04	
Dennis Carlone	5.06	0.00	0.00	0.00	
Leland Cheung	4.15	0.49	0.26	0.04	
Janneke House	3.32	0.76	0.24	0.17	
Craig A. Kelley	2.99	2.49	0.50	0.66	
David P. Maher	7.48	0.00	0.00	0.00	

Nadeem Mazen	4.52	0.76	0.06	0.25	
Marc C. McGovern	6.76	0.40	0.10	0.00	
Sam Seidel	4.85	0.15	0.00	0.00	
E. Denise Simmons	3.70	0.67	0.20	0.15	
Timothy J. Toomey, Jr.	3.92	0.48	0.26	0.11	
Luis Vasquez	5.11	0.39	0.13	0.16	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Dennis Benzan	0.74	0.65	8.91	2.70	0.54
Dennis Carlone	1.27	0.00	11.39	3.80	1.27
Leland Cheung	0.26	0.37	5.64	1.83	0.60
Janneke House	0.70	0.74	5.30	2.52	0.65
Craig A. Kelley	2.32	0.33	8.29	2.82	3.98
David P. Maher	0.93	1.17	9.35	3.97	1.64
Nadeem Mazen	1.59	0.64	8.54	2.68	1.53
Marc C. McGovern	0.81	1.21	7.77	3.33	0.86
Sam Seidel	2.06	0.44	6.62	2.5	1.18
E. Denise Simmons	1.21	0.79	6.76	2.06	0.78
Timothy J. Toomey, Jr.	1.01	0.79	3.92	2.54	0.37
Luis Vasquez	0.99	0.60	8.08	2.71	0.83

Table A-20: LIWC Analysis of Individual Candidate Tweets (Worcester, MA, At-Large City Council)

(Table cells are percentage of total text in the tweets)

Affective	Positive	Negative	Anger	Anxiety	
Stacie Hargis (advanced to general election)	4.66	7.01	0.08	0.00	
Vesna Nuon (advanced to general election)	5.86	5.70	0.00	0.16	
Rick D. Misitano (Did not advance)	4.6	2.49	0.00	0.08	
Brandon Wynn Navom (did not advance)	3.30	4.5	0.00	0.30	
Matthew J. Vieira (did not advance)	5.10	2.81	0.51	0.00	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Stacie Hargis (advanced to general election)	0.29	0.34	7.47	2.14	0.34
Vesna Nuon (advanced to general election)	1.63	0.49	5.86	2.61	0.65
Rick D. Misitano (Did not advance)	1.96	1.06	6.94	2.26	1.58
Brandon Wynn Navom (did not advance)	0.90	0.60	9.61	3.30	1.20
Matthew J. Vieira (did not advance)	1.28	1.28	9.18	3.83	1.79

Affective	Positive	Negative	Anger	Anxiety	
Mesfin Beshir (not elected)	2.43	0.31	0.12	0.05	
Joseph Petty (elected)	5.15	0.21	0.21	0.00	
Kate Toomey (elected)	5.61	0.56	0.14	0.00	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Mesfin Beshir (not elected)	0.50	0.96	5.66	2.35	0.75
Joseph Petty (elected)	0.64	0.43	6.65	3.22	1.07
Kate Toomey (elected)	1.19	0.63	7.85	2.45	1.26

Table A-21 Election Tweet Comparison, by City
Categories are percent of total words across all candidate tweets.

Affective	Positive	Negative	Anger	Anxiety	
RCV Cities					
Minneapolis	4.75	0.80	0.26	0.10	
St. Paul	5.11	0.49	0.10	0.03	
Cambridge	4.67	0.50	0.17	0.10	
Plurality Cities					
Boston	5.76	0.41	0.16	0.05	
Seattle	3.97	0.65	0.27	0.07	
Tulsa	5.14	0.78	0.27	0.11	
Spokane	4.38	0.00	0.00	0.00	
Madison	3.85	0.00	0.00	0.00	
Lowell	4.57	5.64	0.04	0.10	
Worcester	3.06	0.34	0.13	0.04	
Cognitive Process	**Tentative**	**Certainty**	**Social**	**Inclusive**	**Exclusive**
Minneapolis	1.14	1.06	7.50	2.84	1.24
St. Paul	1.39	0.63	9.14	4.76	1.08
Cambridge	0.94	0.72	7.04	2.65	0.80

Plurality Cities					
Boston	0.71	0.72	7.64	2.53	0.72
Seattle	0.65	0.62	7.23	3.19	0.67
Tulsa	1.13	0.87	8.27	2.82	1.02
Spokane	1.09	0.73	9.49	4.01	0.73
Madison	0.00	0.00	7.69	1.28	0.00
Lowell	1.02	0.64	7.54	2.47	0.88
Worcester	0.57	0.86	5.99	2.39	0.78