

Appendix

All About Feelings? Emotional Appeals as Drivers of User Engagement with Facebook posts

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Appendix

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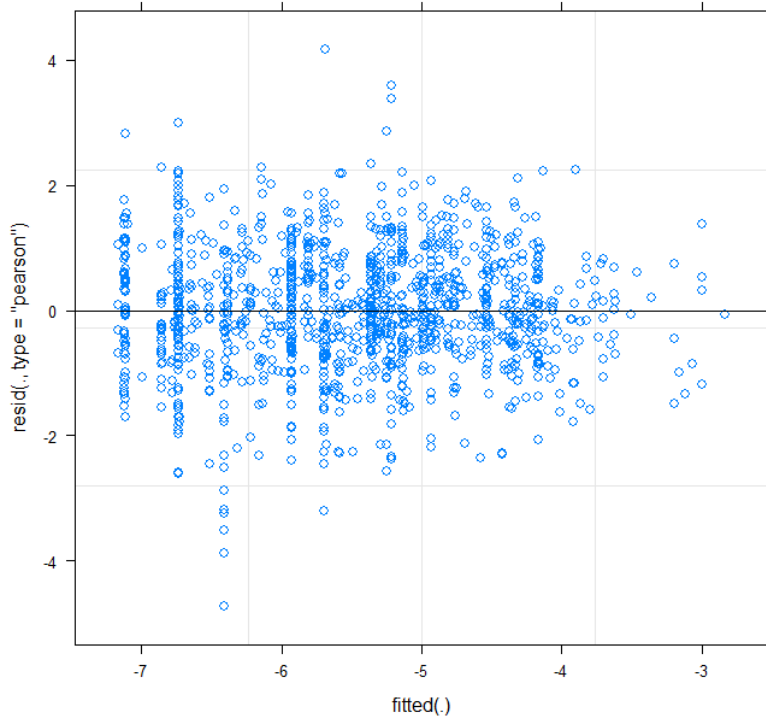
Appendix A: Inter-coder reliability

We conducted two rounds of inter-coder reliability. The tables below show the coefficients for the second round where the researcher and a non-expert coded the same sample of 10% posts.

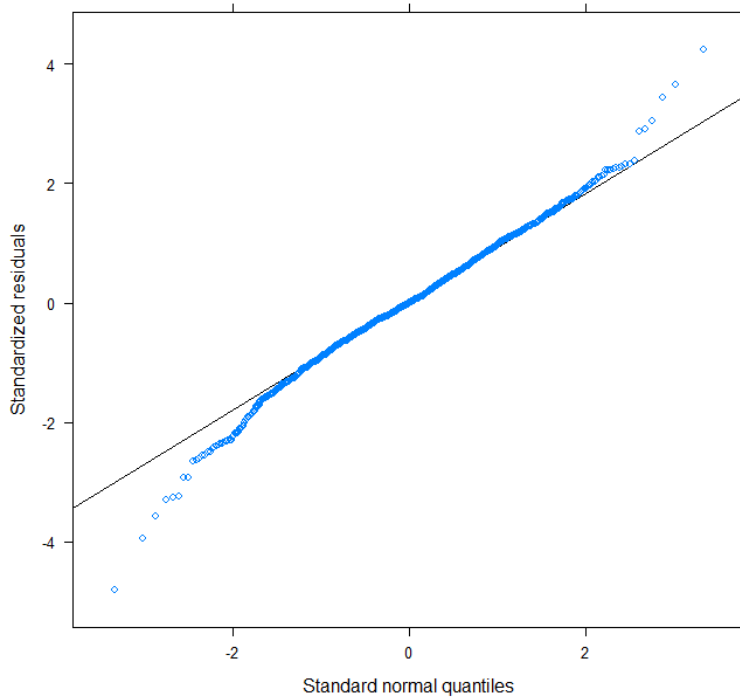
Variable	Krippendorff's alpha
People	0.804
Elites	0.920
Others	1.000
Fear	0.868
Anger	0.810
Enthusiasm	0.840
Pride	0.956
<i>Topics</i>	
EU	0.957
Immigration	1.000
Sovereignty	0.972
Economy	0.736
Identity/history/tradition	0.902
Labour market/Welfare	0.695
Healthcare/NHS	0.949
Indicent/crisis	1.000
Foreign/intern.	1.000
Environment/climate	1.000
Elections	0.874
Other	0.882
<i>Purpose of post</i>	
Mobilization	0.945
Information	0.860
Self-promotion	0.794

Appendix B: Diagnostics model 2 (DV = Engagement) mixed effects model

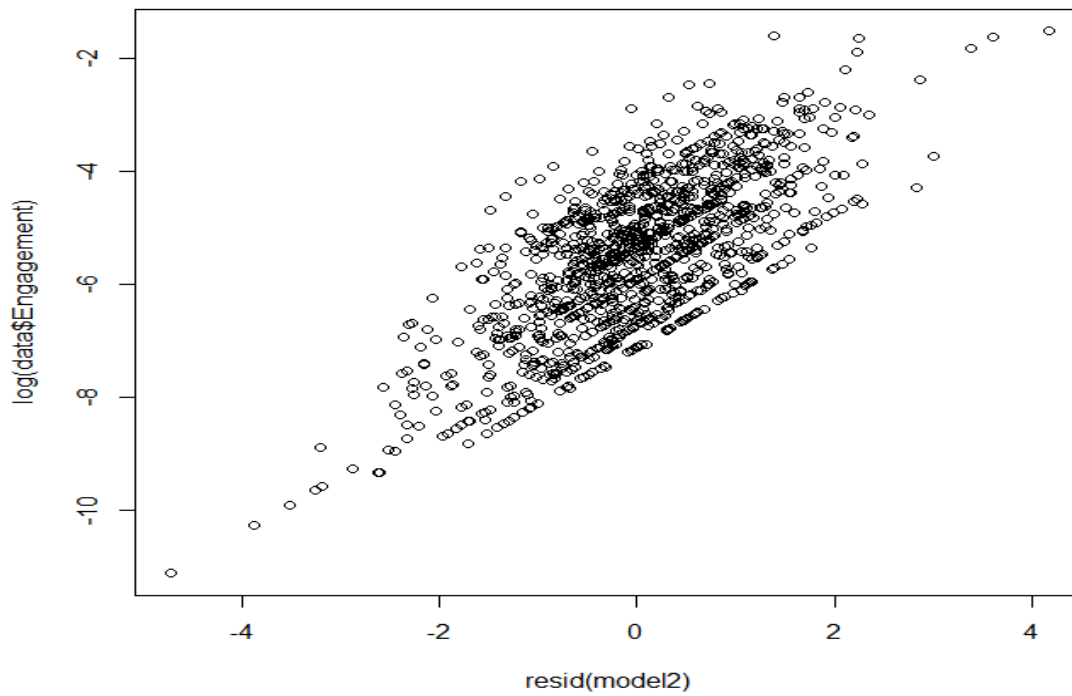
Homogeneity of variance: variance of residuals is somewhat equal across groups at the individual level. OK



Normal distribution of residuals - OK



Linearity: upward pattern



Multicollinearity – OK (not present)

	VIF
Fear	1.12
Anger	1.40
Pride	1.12
Enthusiasm	1.19
People	1.24
Elites	1.55
Others	1.42
Party/Politician	1.01
Campaign	1.03
Frequency post	1.10
Length post	1.29
Immigration	1.37
Sovereignty	1.17
Economy	1.21

Appendix C: Robustness check for the DV – Engagement (N=1203)

To make sure that the estimates are robust and not a result of the way we constructed the dependent variable, we ran the same analysis (model 2) with an alternative formulation for the Engagement score:

$$\text{Engagement_alt} = \text{Reactions} + \text{Comments} + \text{Shares}$$

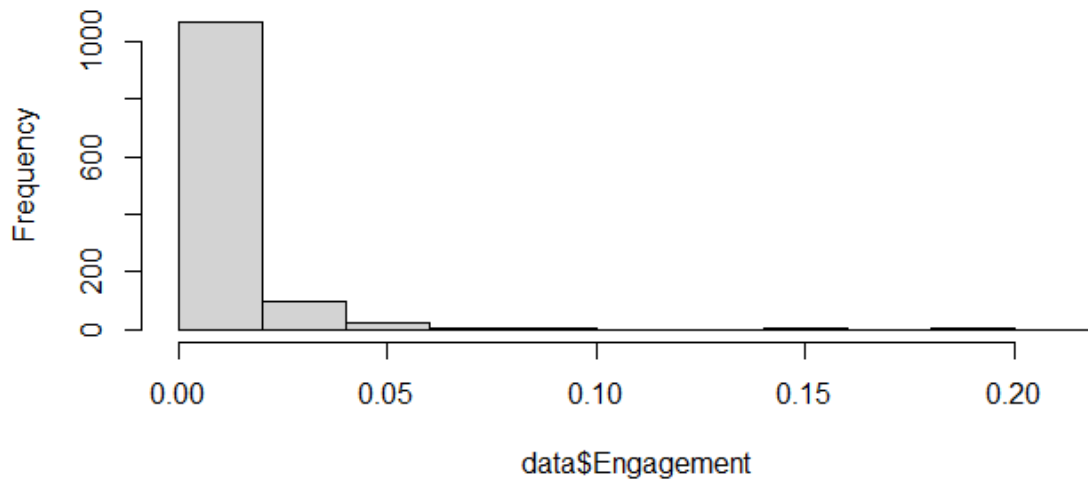
	M3 (Eng_alt)
(Intercept)	44009.92*** (171.57)
<i>Emotions</i>	
Fear	-5.37 (15.61)
Anger	57.52*** (9.58)
Pride	59.06*** (12.87)
Enthusiasm	82.43*** (9.11)
<i>Populist content</i>	
People	18.38+ (9.92)
Elites	-5.15 (10.51)
Others	9.93 (22.77)
<i>Controls</i>	
Politician/Party profile	291.42 (97.59)
Brexit campaign	-50.67*** (7.28)
Freq. post	1.09 (0.70)
Length of post	0.00 (0.00)
Immigration	12.80 (12.92)
Sovereignty	16.79 (12.58)
Economy	10.76 (12.29)

Pseudo <i>R</i> ² (fixed effects)	0.26
Pseudo <i>R</i> ² (total)	0.66
AIC	3460.28
BIC	3546.85

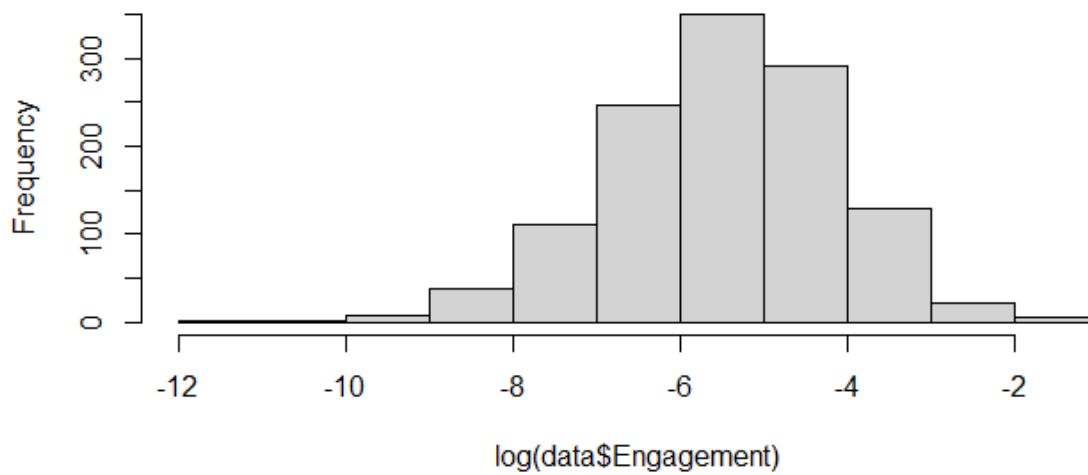
The estimates for the emotional appeals effects remained robust in the alternative model. Removing the division of the Engagement scores by the number of Followers resulted in an increased explained variance at the actor-level. That is not surprising, since our initial reason for including the number of Followers in the Engagement score was that political actors with more Followers were expected to receive more Engagement in absolute numbers. We propose that a relative Engagement index is a better choice in assessing the relationships tested. Furthermore, the Engagement index divided by the number of followers provides a slightly better model fit.

Appendix D: Histograms of the dependent variable Engagement

Histogram of data\$Engagement



Histogram of log(data\$Engagement)



Appendix E: Codebook

Coding of emotional appeals

We conceptualized emotional appeals as communication that attempts to “stir the feelings of the audience when delivering a political message” (Brader, 2006, p. 4). The coding scheme of emotional appeals is an extension of the Affective Intelligence Theory (e.g., Marcus, 2002; Marcus et al., 2000) and appraisal theories (e.g., Frijda, 1988; Lazarus, 1991; Lerner & Keltner, 2001; Smith & Ellsworth, 1985) to the field of political communication, based on the notion that different message cues trigger specific emotions (Brader 2006; Ridout & Searles, 2011). In order for the appeal to any of the four emotions of interest in this study to be coded as present, the theoretically derived indicators outlined below had to be present.

Appeal to fear: This category was coded as present when it had content associated with threat, insecurity, looming negative development, future negative scenario, pessimism, uncontrollability, uncertainty (Brader 2006; Lerner & Keltner 2001; Marcus & MacKuen 1993; Marcus et al. 2000; Lazarus 1991; Frijda 1988)

Appeal to anger: This category was coded as present when it had content associated with attributing responsibility or blame, stating/implying need for punishment for those responsible for a problem or a negative development. It can contain expressions of anger, frustration, outrage, lack of satisfaction with a given situation, where those responsible for the negative situation are identified, at last implicitly (Brader, 2006; Lazarus & Lazarus, 1994; Lerner & Keltner, 2001).

NB. Clarification of the distinction between appeals to fear and anger. Both fear and anger are negative emotions, and in some posts, it is difficult to distinguish whether they contain appeal to fear or anger, or both. The most important difference between fear appeals and anger appeals is that anger is normally elicited when a (potential) negative situation/development is specific, caused by others, and under human control, and there is an element of blame assignment/blame attribution to those responsible. Fear is rather elicited when there aren't necessarily specific culprits responsible for the (potential) negative situation/development, but there is a strong element of risk, threat and/or uncertainty. Consequently, posts aiming to elicit anger will state/implicate the cause of the threat or a negative situation and who can be blamed, while posts aiming to elicit fear will highlight content associated with uncertainty and risk.

Appeal to enthusiasm: This category was coded as present when it had content associated with a possible better future, a positive scenario, outcome, development, collective energy, positive goal-oriented behavior. While it usually features a future positive scenario, it can also be related to a positive development that is currently happening or has recently happened but has positive implications for the future. An element of agency must be present (Brader, 2006; Marcus et al., 2000)

Appeal to pride: This category was coded as present when it had content related to history, national achievements, national heritage, national identity. Usually related to an

achievement, but it can also be content with positive descriptions of history, nation, national identity, glorified past. Pride appeals were also coded when political actors were expressing appreciation for the nation, its history, values, achievements etc. (Brader, 2006; Lazarus, 2001; Ridout & Searles, 2011)

Examples of posts with emotional appeals

Emotional appeal	Political actor	Facebook message
Pride and enthusiasm	Nigel Farage	<i>Outside of the EU we will be the masters of our own destiny and able to blaze our own trail in the world. (Enthusiasm: positive future, goal-oriented behavior; Pride: referring to the glorified past and national identity)</i>
Pride and enthusiasm	Nigel Farage	<i>I believe in Britain. We are good enough and big enough to make our own trade deals and thrive as an independent nation.</i>
Anger	Nigel Farage	<i>EU already with open borders now wants visa-free access for Turkey. We would be safer outside EU.</i>
Pride and enthusiasm	Boris Johnson	<i>Fantastic to be with the troops this evening banging the drum for Zac Goldsmith ahead of Thursday's election. He will make a great Mayor. So let's back Zac and crack on with the renaissance of the greatest city on earth.</i>
Anger	Boris Johnson	<i>We remember with undying gratitude the Anzacs who gave their lives for freedom. And it is amazing to think that today we discriminate against Australians and New Zealanders who want to come to this country and in favour of those from the EU.</i>
Pride	Boris Johnson	<i>Who was St George? Nobody knows but he is said to have been a Cappadocian bacon merchant who made a fortune from victualling the crusaders. And if that is true it is highly appropriate that he should be our national Saint - a heroic and independent small business man of the kind that still today forms the backbone of the English economy. Above all he was a man who had the guts to stand up to the prevailing consensus of the establishment. You will recall that for decades the people had been oppressed by an alien tyrant, a dragon that ate people and took 20 billion pounds a year and did terrible economic damage. The elites all collaborated in the disaster. They said that there was no other option. They deplored the dragon but they said that getting rid of it was too risky. Stuff that said St George. He slew the dragon, liberated the people and restored democracy. And he got the princess. Cry God for England and St George today!</i>

Fear	David Cameron	<i>A sobering warning from George Soros on the consequences for family finances if we leave the EU. We're stronger in Europe.</i>
Fear	David Cameron	<i>Tomorrow our country makes the most important decision in a generation: whether to stay stronger, safer and better off in Europe – or leave, and put it all at risk</i>
Enthusiasm	David Cameron	<i>Today volunteers from all parties are working together to deliver one clear message: our country is #StrongerIn.</i>
Pride	David Cameron	<i>This St George's Day, let's celebrate "this blessed plot, this earth, this realm, this England."</i>
Anger	Labour	<i>The government plan to merge the independent Fire and Rescue Service with the police. Also, under the Tories we've lost 18,000 police officers and 5,000 PCSOs. Now they want volunteers doing the work of highly-trained officers. Tell them to think again - co-sign Andy Burnham's letter: www.labour.org.uk/999letter</i>
Enthusiasm	Labour	<i>It's election week - in just three days' time our country will take to the ballot box to choose our local representatives. This is an opportunity to send a clear message to David Cameron and his government: we are standing up for a fair economy, for our NHS, for affordable housing, and for safer communities. So stand up with us on Thursday. If you're with us, share this →</i>
Anger	Jeremy Corbyn	<i>At Prime Minister's Questions today, I asked David Cameron why he and his government refuse to listen to those who have dedicated their lives to public service. Whether it is the teachers who are saying they do not want forced academisation or the junior doctors who say Jeremy Hunt's plans are not safe for patients and not sustainable for the NHS. Our teachers should be at the heart of decisions about our education system and our doctors should be at the heart of decisions about our National Health Service.</i>
Anger	SNP	<i>"Tories want a blank cheque for these useless weapons, and for what? To preserve Westminster's self-indulgent image of importance." Mhairi Black MP opposing the UK government's desire to spend up to £205bn on Trident renewal.</i>
Enthusiasm	SNP	<i>Being part of the EU means more opportunities for young people - by voting Remain we can safeguard these rights and freedoms for the future. Find out how. http://www.snp.org/how_the_eu_benefits_young_people</i>
Enthusiasm and fear	Liberal Democrats	<i>Today Britain will have to make the biggest decision in our lifetime. Will we lead in Europe and be an outward-facing, open country? Or will we turn inwards and isolate ourselves from our closest neighbours? This decision reaches well beyond our lifetime and will affect many</i>

		<i>generations to come. Vote Remain today because working together in Europe, Britain is at its best! Polling stations are open until 10 pm. Pledge your support to vote Remain: www.voteremain.win</i>
Pride	Liberal Democrats	<i>I am proud of our country. I am proud of this people. I am proud of this land. I will not have the flag of our country stolen from me by people whose aim and ambition it is to make us small, insignificant, hateful and opposed to one another. We are a diverse, tolerant and brilliant country. That is Great Britain.</i>

Coding of populist content

Drawing on existing studies (e.g., Aalberg, Esser, Reinemann, Stromback & de Vreese, 2016; Ernst, Blassing, Engesser, Buchel & Esser, 2019; Jagers & Walgrave, 2007; Wirz, 2018), which have translated key ideological components of populism into measurable categories, we operationalize populist content as people-centrism, anti-elitism and exclusion of others, whereby each of these can be expressed with a number of communication strategies. Indicators for each category were adapted, often in a simplified form, from the abovementioned studies.

People centrism: This category was coded as present when a post stressed people’s virtues and/or achievements, stated a monolithic/homogenous people, demonstrated closeness to the people, or demanded power for the people.

Anti-elitism: This category was coded as present when a post blamed or discredited the elite, excluded the elite from the people, or denied power to the elite.

Ostracizing ‘the Others’: This category was coded as present when a post blamed specific groups, excluded specific groups from the people, or discredited specific groups.

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