

Tools & methods: Revised version of assignment 5

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Former presidents of the United States: Barack Obama and Donald Trump, both made profound changes to the country in their own ways. By analysing the tweets of Barack Obama and Donald Trump, we could get more insights in the differences between their language use, rhetoric's and communication strategies. More importantly, by looking at specific key terms and collocations we could get a better understanding of how these two presidents represented themselves and their place in the American political context. It would be interesting to delve into a specific topic. For example the questions about race, discrimination and inequality, which have haunted the United States for over a long period of time and have recently been very much debated again with the appearance of the 'Black lives Matter' movement among many other initiatives to bring these racial divides on the American political agenda. In order to compare the word use of these two presidents, the different tools of Voyant could help to do a textual analysis.

Before we will look at keywords and collocations and compare them between the two presidents, we will start the analysis by looking at certain trends. These will be interpreted within the political context of America. In order to know more about how these presidents reflected at racism and inequality we could see when they started to use certain keywords associated to these issues and, more importantly, why they used them.

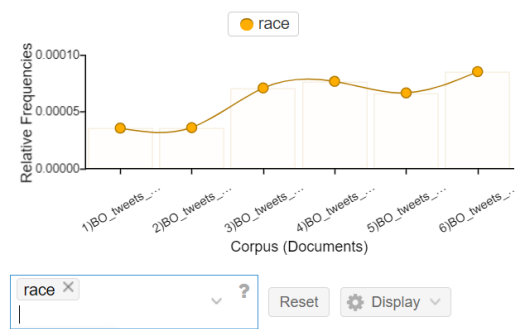


Figure 1 use of 'race' by Obama

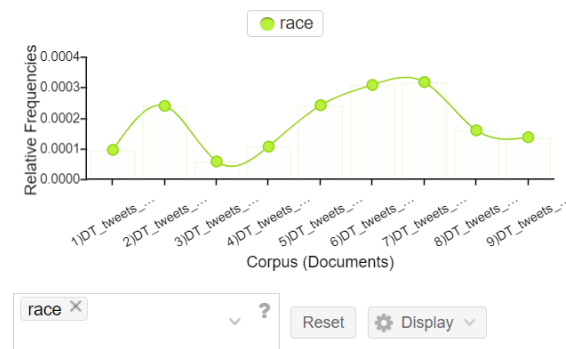


Figure 2 use of 'race' by Trump

It is important to note, when looking at these graphs, that they only tell us when the word 'race' was used and not in which context. We have to keep in mind that these graphs do not help us to draw any conclusions. However, it is still useful to make certain assumptions about the rhetoric of both presidents and compare them. In the graph about Obama we see that the word 'race' is used rather consistently. In comparison to the graph of Trump, where the word is mostly used from 2016 till 2018, we see that Trump used the word mostly during his campaign. This could indicate that Trump might formulated a

more populist rhetoric where he addressed the questions about race and inequality only to gain more attention from the conservatist electorate. Obama used the term more consistently because the inequality between races in America has been part of his rhetoric and politics during the majority of his presidency.

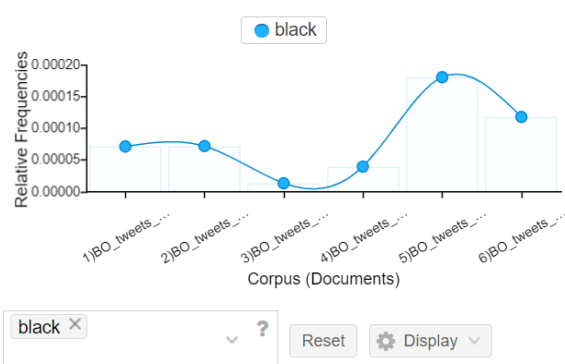


Figure 3 use of 'black' by Obama

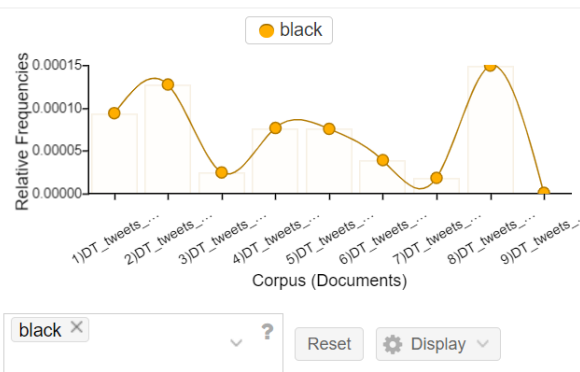


Figure 4 use of 'black' by Trump

When we look at the use of the word 'black' we see that Trump used the term more frequent. There were times when he used the word way more than other times. It does confirm the populist nature of Trump because it is probable that he only used the word to address the issues going on at the time. In comparison, even though Obama used the word 'black' not as much as Trump, we see a great increase at the end of his presidency. It could be that he wanted to address the issues once more to make the electorate aware before electing a new president.

In order to get a grasp of the context in which these keywords are used by these two presidents we could look at Voyants 'keyword in context' tool.

DT_twe...	of how our country wastes money... http://t.co/iWRhaUy #trumpvlog I was interviewed by ...	black	and Hispanic youths. Very troubling. My thoughts on the Republican Party in today's #tru...
DT_twe...	will repeal Obamacare on day one. Very dangerous pattern developing across country by...	black	Panthers are back at the same Philly polling station from '08 http://t.co/LIBmCVDs Don't I...
DT_twe...	this October in London http://t.co/SV6KAS1E I hope the @RNC is ready for a Third Party ...	black	Muslim in the White House." If only the morons @AP were as concerned with Obama's in...
DT_twe...	TheSlyStallone and Arnold @Schwarzenegger on 'Expendables 2' #1 box office opening. ...	black	for a 3rd straight year. He is a fantastic governor. If @BarackObama really loved this cou...
DT_twe...	tactics being used by @BarackObama campaign against @MittRomney. Must stop sayin...	black	unemployment? Seth Meyers was terrible co-hosting with Kelly. Marbles in his mouth-&a...
DT_twe...	records contradict @BarackObama and show he was only at Columbia 1 year? http://t.co...	black	unemployment. Nice interview in the @The Atlantic of Sarasota GOP Chair Joe Gruters o...
DT_twe...	Attitude is a little thing that makes a big difference. -- Winston Churchill HYPOCRITE! Lon...	black	Ill premiere in New York City http://t.co/l66Z4pI2 We loved the movie! Why are armed dro...
DT_twe...	Newsmax_Media interview discussing OPEC US gas resources @MittRomney and runni...	black	." Congrats! Cadillac has made amazing strides in the beauty and quality of their cars. Gr...
DT_twe...	t.co/BXhPi7ci The @BarackObama policy realized! So wrong! @BarackObama is hosting...	black	Caucus Chairman Emanuel Cleaver is right. @BarackObama's budget is a "nervous brea...
DT_twe...	t.co/rZ2FFrgajw Iran must immediately allow Christian #PastorSaeed out of prison or we ...	black	politicians & was believed--when she ratted on @AGSchneiderman nobody listened...
DT_twe...	dose your days start? 4 or 5 A.M.! @LiamMcCallum85: @realDonaldTrump should be ele...	black	man I'm dead b4 ours falls cuse if I ain't we're gone 1st,09-10-2013 10:02:21,19,29,false...
DT_twe...	jMzvTmjLGp @samaraOMGharper Thanks. @ACmeansBusiness Thanks. @stevenfarris...	black	@realDonaldTrump 4real.Great Dean and you will make it! Watch the first #TrumpVine re...
DT_twe...	our debt be debt free 3. DonaldTrump become President,12-24-2014 23:29:17,21,69,fals...	black	Sand Beaches exotic people what a vibe! @Luckyblue02: @realDonaldTrump Merry Chri...
DT_twe...	after 9:00 o'clock in the evening. What were they thinking? Our country is totally fractured...	black	president for generations! As China and the rest of the World continue to rip off the U.S. e...
DT_twe...	you imagine what Putin and all of our friends and enemies throughout the world are sayin...	black	president the racial divide seems greater than it has in decades.If Obama were a leader t...
DT_twe...	sidelinesev: @realDonaldTrump best view in Chicago tonight http://t.co/Qp44SonDNe @...	black	Donald Trump. Great! @HighEnd_Gear: #Amazon USA : Time to Get Tough: Making Am...

Figure 5 context about the word 'black' by Trump

When using the context tool on Trump's tweets, we see that Trump uses the word mostly to address all 'the problems' which he associates with this group. For example, he frequently uses the term 'unemployment' and how things are 'very troubling.' What is more interesting, is that he mostly uses

the word ‘black’ in order to refer to the previous ‘black president.’ As the tweets lay bare, Trump tries to blame Obama for all the aspects of America which are still going wrong and refers to him as the ‘previous black president.’ For example, in one of the tweets Trump uses the word ‘black’ to refer to the ways Obama made the racial divide even greater.

usarmy ALL THE WAY. GO	black	Knights! RT @USNavy: Will u
t.co/QUKf18H #JobsNow .@NewsOneOfficial, HelloBeautiful,	black	Planet, UrbanDaily & Grio bring your
Video: Valerie Jarrett on National	black	HIV/AIDS Awareness Day: Coming
happened in the age of	black	& white TV." #SOTU "the best
an inspirational mtg w/ courageous	black	women living w/ #AIDS. My
heroes at the @whitehouse during	black	History Month. Watch: http://t.co
to President Obama, commemorates National	black	#HIV/AIDS Awareness Day: http
RT @AIDSgov: Today is National	black	HIV/AIDS Awareness Day. Know
day & became the 1st	black	player to suit up for
EricGarner This is not a	black	problem or a white problem
DYgaZmDnH "I'd rather be born	black	, American, female, in the 20th
88ITzD61PB President Obama: "Whether you're	black	, white, Latino, Asian, Native American
we can do it together—	black	and white; urban and rural
open, not just for the	black	porter, but the white chambermaid
Americans behind bars. They're disproportionately	black	and Latino." —@POTUS https://t.co
CriminalJusticeReform "The incarceration rate for	black	women is twice as high

Figure 6 context about the word 'black' used by Obama

When we compare the context of the word ‘black’ used by Obama, the table looks very different. We see that Obama used the word to make awareness about important campaigns, such as ‘Black history Month’ and ‘Black women living with Aids.’ Moreover, we can see how Obama tries to create a form of unity by saying things like “We can do it together – black, white, urban and rural” or “this is not a black problem or a white problem.” In comparison to Trump, we can see that Obama tries to create a sense of unity and promote the emancipation of people of colour.

When looking at the collocations, this is confirmed. For Obama the word ‘black’ is connected to ‘white,’ ‘woman’ and ‘awareness.’ For Trump the word ‘black’ is mostly connected to ‘unemployment’ and ‘president.’

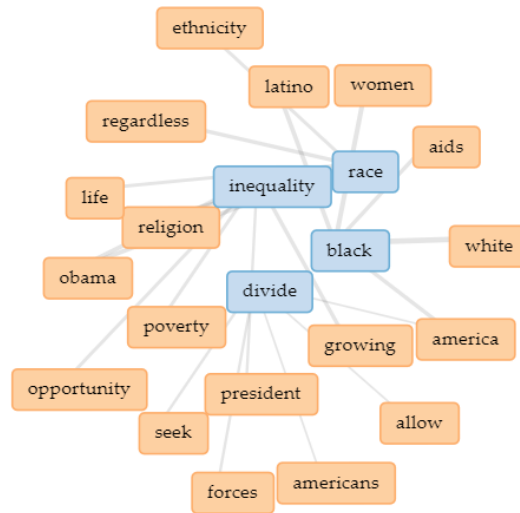


Figure 7 collocation graph Obama

When looking at the collocations in a graph, we see for Obama that the words I inserted are mostly connected to each other in a cluster. We see how 'black' and 'white' are connected to each other, where 'black' is connected again to 'inequality.' 'Race' is grouped with 'aids,' 'woman,' 'Latino's' and 'ethnicity.' This partly confirms that it seems like Obama is more concerned with the emancipation of these groups and how they are connected to division and inequality in America.

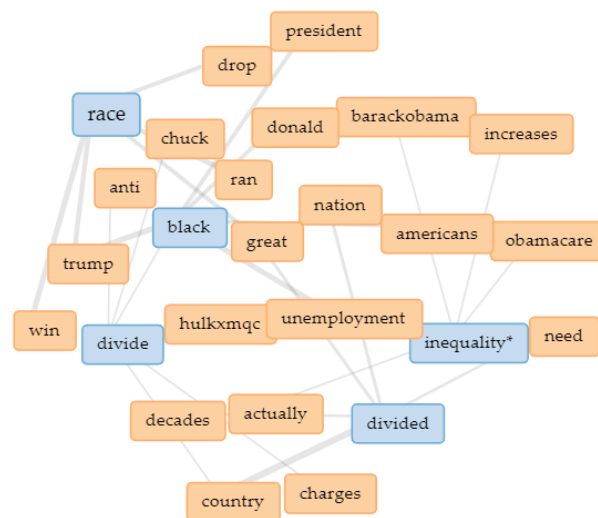


Figure 8 collocation graph Trump

When looking at the collocation graph of Trump we see that the words are not really clustered together. We see that 'inequality' is mostly connected to Obama. Moreover, the word 'black' is connected to 'unemployment' as we have seen with the context tool. When Trump talks about 'divide' the word is more associated with the country itself than with questions of 'race,' 'discrimination' and 'equality.' This could indicate that Trump was more concerned with a populist and nationalist approach, whereas Obama focused on creating unity and the emancipation of certain groups.

Up till now this brief textual analysis has shown the different use of certain keywords surrounding the theme of racial divides in the United States within the tweets of both Trump and Obama. When we look at the same words in the TensorFlow Embedding Projector, we might get some different results we could compare.

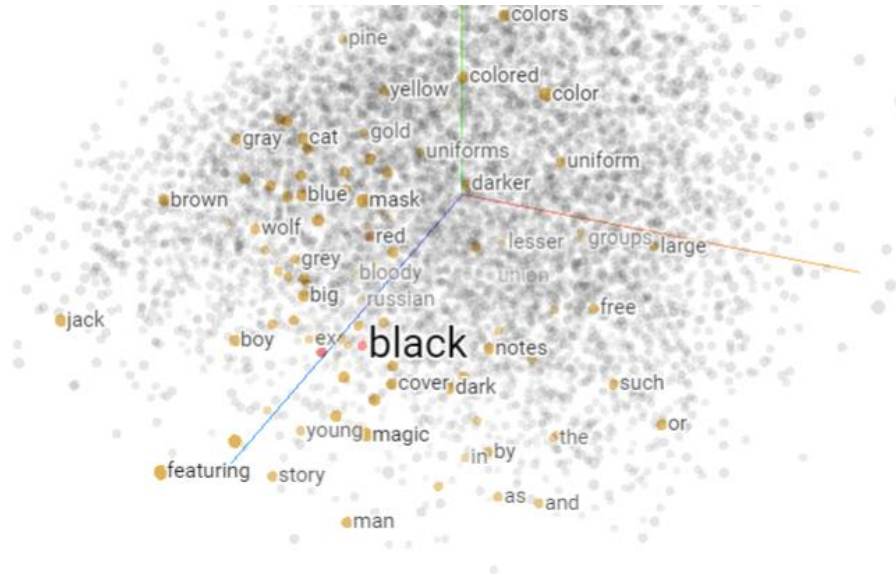


Figure 9: Word embedding of the keyword ‘black’ in TensorFlows Embeddings Projector

When looking at the word ‘black’ in the Embedding Projector, we see that there are almost no words that could be linked to racial issues. In general, the word is mostly used along words that express colours or even animals in some cases. When we look at the embedding of the word in the tweets of the presidents, we see that the word alone is already used with regard to societal and political issues. In Obama’s case: words like ‘race’ or ‘inequality’ and in Trumps case: words like ‘unemployment’ or ‘president.’ It might be no surprise that the word use of the presidents is more related to words which express political concerns, words that can be meaningful in a certain rhetoric. However, in general the word ‘black’ is merely a colour and only gets the meaning of racial issues when expressed by presidents who have to face these issues going on in their country.

Moving on, when we look at the keyword ‘inequality’ we can build upon these same conclusions. In the Embedding Projector the word ‘inequality’ is mainly used with words who express some sort of

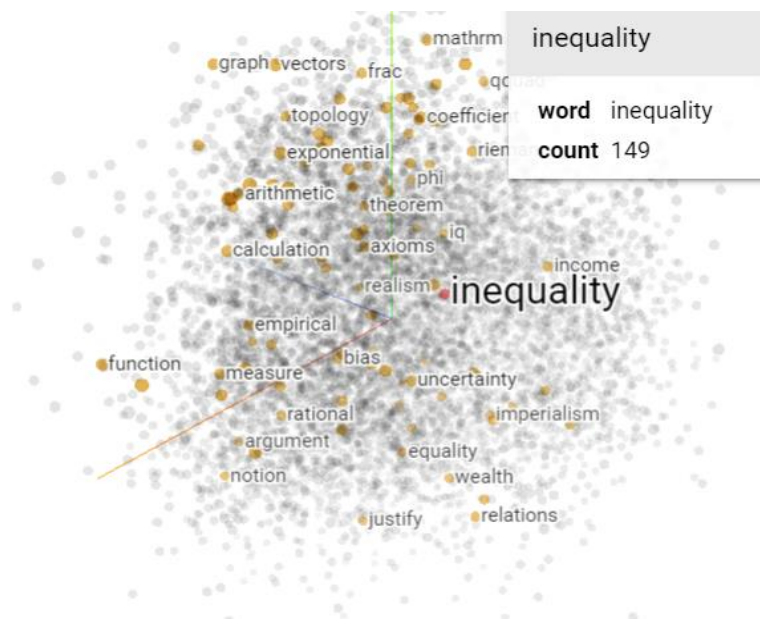


Figure 10: Word embedding of the keyword ‘inequality’ in TensorFlow’s Embeddings Projector

inequality in mathematics. For example words like ‘calculation,’ ‘exponential,’ ‘vector’ or ‘coefficient.’ We do see some words with a more social or political meaning, like ‘imperialism,’ ‘equality’ or ‘wealth.’ However, we cannot say that these general word embeddings express any kind of correlation to racial issues, especially racial issues in the United States. Looking at the use of the word by the presidents we see how Obama connected it to words like ‘black,’ ‘Latinos’ or ‘divide’ and Trump to words like ‘America,’ ‘Obamacare,’ or ‘Barack Obama.’ Here we see again how the keyword, when used in the context of two presidents, is embedded in a political context, be it to address the actual issue of racial division or to implement a populist rhetoric.

Finally, when looking at the word ‘racial’ there are some similarities between the embedding of the word in the projector and the tweets of the presidents.

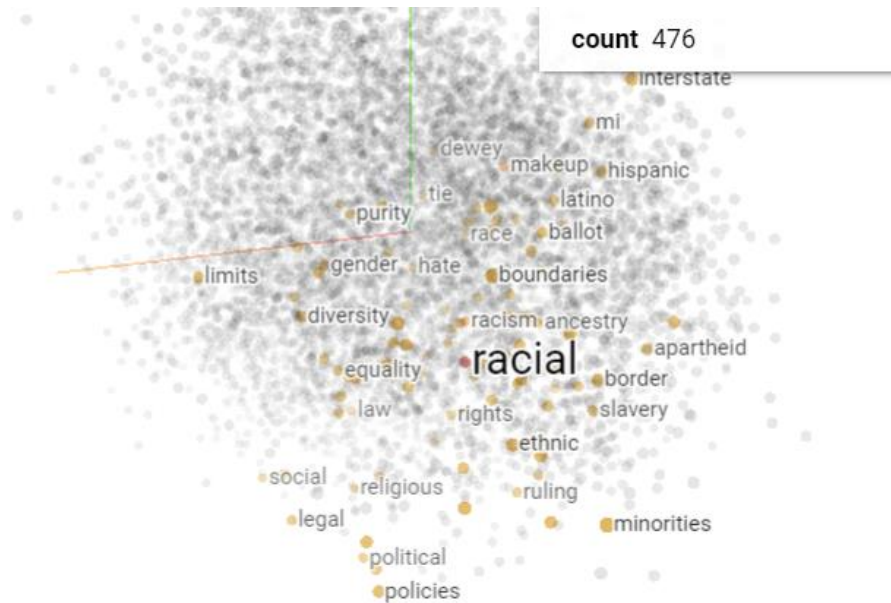


Figure 10: Word embedding of the keyword 'racial' in TensorFlow's Embeddings Projector

Here, we can see that the word 'racial' is at least embedded with the same words which could express racial divides. For instance, words like 'hate,' 'rights,' 'apartheid,' and 'minorities' all express some level of political discussion and various issues of racial divides. Also words like 'political,' 'legal,' and 'policies' express that this word is used with regard to some expression of political events or rhetoric's. However, it is true that the tweets of the presidents express this word more with other words which help to back up the rhetoric of their choosing. For Obama the words are used to express his emancipatory goal and for Trump the words are associated to the former president as he tends to focus more on the feelings of nationalism in the country as a whole.

By comparing the embedding of our keywords from the tweets of the presidents with the embeddings in the projector, we can see how certain words get a layer of meaning when addressed by presidents. For them, the words are a way to express their political statements. However in general these words are mostly used in various different contexts. Although these contexts still remain partly unknown, we do see how various contexts change the meaning of a certain word. In the rhetoric's of a president a word like 'black' can be used with other words that address very complex issues in a country and are expressed in a way to persuade an electorate. Whereas in other contexts, the word is used with other words that express a colour or a mathematical issue.

