

Fake narratives, dominant discourses: The role and influence of algorithms on the online South African land reform debate

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Abstract Within this paper the authors explore the discourse surrounding algorithmic processes, by examining the way a search engine's result influenced an online debate about land reform in South Africa. The article begins by reflecting on the rise of the internet contributing to issues around fake news. Then it continues to discuss the incident that serves as case study for this paper. In June 2018 Twitter users criticised the search engine Google for only displaying photos of white people when one type the words "squatter camps in South Africa" into the *Google Image* search bar. In the debate that followed, many of the online users accused Google of propagating a biased narrative to destabilise land reform. The paper's purpose is to explain the role of algorithms to readers from the fields of humanities and social sciences without a technical background in computer science. Through exploring the "squatter camps in South Africa"-case study, the authors intend to reveal to the reader the power online search engines have in shaping the public debate. Yet, through conducting their own search on different international search engines, but using the same key words, they prove that it is not in fact the algorithms that are biased, but rather the online data that is generated by internet users themselves.

Keywords: Algorithms, Bias, Data, Search Engine; South Africa; Land Reform, Debate, Google, Social Media.

1. Introduction

"We are living through a unique period of human history, an intense period of flux, change, and disruption that may never be repeated. This moment in time is not unlike the Enlightenment (1650 – 1800), when there were also great shifts in awareness, knowledge, and technology, accompanied by great societal changes," (Aiken, 2016: 8).

This is a period of rapid change where global citizens' access to the Internet is increasing rapidly, and even those from the Global South are connected through the growth of mobile technologies (Nuechterlein & Weiser, 2013: xvii). In the words of cyber psychologist Mary Aiken (2016: 11), "as devices and gadgets change, and technology changes, the cyber environment changes with it, which impacts human behaviour again". According to Aiken (2016: 8), "the concept of absolute freedom is central to the ideology of the Internet". Yet some argue that this freedom resulted in the prevalent culture of fake news in society. It is true that an element of fake news has always been in circulation, especially where the yellow press and their sensational headlines was concerned. Still in this new era a simple untruth can turn into a viral rumour that has the potential to affect millions of people worldwide (Houseman, 2018).

According to the director of Media Monitoring Africa, William Bird (2018) users have started questioning the reliability of the news they consume, but not necessarily the role of search engines in programming public discourse. "The average South African user implicitly trusts Google and the information that the search engine provides". This changed in 2018, when South African Twitter users blamed the Google search engine for spreading disinformation.

On 13 June 2018 Xolisa Dyeshana tweeted to his Twitter followers that a Google Image search for the term "squatter camps in South Africa", predominantly shows pictures of *white* people in squatter camps. Dyeshana pointed out that the search engine neglected to show images of *black* people in squatter camps. This ignited a Twitter debate, with another user, King Tsoanelo Nkosi or @KingTsoanelo, arguing that Google's search results were not a true reflection of "squatter camps in South Africa" but rather a "sinister agenda to disturb land reform" (as quoted from Twitter). The topic began trending on Twitter and soon dominated the South African public discourse.

Local journalists were quick to explain to readers the subtle role of algorithms or "filter bubbles" on online news consumption, and in turn, on subtly manipulating their worldview (Haffajee, 2018a). A month later, at public event

discussing the role of algorithms in Johannesburg, Bird (2018) made a joke that for the average South African citizen, the word “algorithm” invokes images of mathematical formulas that they struggled with during their school days, but that they needed to educate themselves about it, since it has the potential of influencing their beliefs about the world around them.

In layman’s terms, an algorithm “is just a finite sequence of steps to solve a problem” (Christian & Griffiths, 2016). Traditionally, when programmers wanted a computer to execute a command, they had to write down algorithms that would explain the process in painstaking detail. Through advancements in machine learning algorithms, or “learners”, computers were soon able to solve complex problems on their own by making inferences from data. “And the more data they had, the better they got. Now we don’t have to program computers; they program themselves,” (Domingos 2015).

The rapid spread of fake news is often blamed on trolls and bots (Bilic 2016). Thus, it is important to note that algorithms play a role in the bot world as well as with the crafting of message/response through AI designed by humans. However, the authors do not agree with most of the commentators that algorithms are solely to blame for the phenomenon that happened in the so-called “white squatter camps”-case study. Therefore, we will use this paper to critically discuss the allegation made against the Google algorithm of “spreading disinformation in an attempt to influence the online debate about land reform”. But what is the context of the land reform debate, and what makes the online public discourse about the topic so important? That will be discussed in the next section of the paper.

2. The context of the land reform debate in South Africa

For a paper dealing with search algorithms and the online land reform debate, it seemed to be a good experiment for the authors to type the key words “land reform” and “South Africa” into the Google search bar. Taking into consideration that the same search engine has been monitoring one’s searches for more than a decade, and the machine learning of the system having determined the interests of the author, the page features multiple news stories about the land reform issue. First on the page is a link to the tab “land reform” on the online news portal news24; followed by an article on *TimesLive* (dated 26 September 2018), headlined “*Land reform critical for SA, Ramaphosa tells UN*”; a *Fin24* article from 12 September 2018 warning that a *Legal battle looms over South Africa’s land reform plans* and a Wikipedia page titled *Land Reform in South Africa*. As the specific author frequently visits the Academic platform *Researchgate*, it might not be surprising that at the bottom of the page Google have chosen to reveal a scholarly article about *Land Reform in South Africa: Problems and Prospects* by the authors Ruth Hall and Gavin Peters Williams.

According to Hall & Williams (2015: 1), “land reform is one of the ways in which past racial exclusions and inequalities are being addressed in the ‘new South Africa’”. The Republic of South Africa’s Constitution (1996) has given a mandate to the Department of Land Affairs to “restore land to those unjustly deprived of land rights since 1913; redistributing land to those denied equitable access to it under segregation and apartheid; and securing the tenure rights of those excluded in the past from acquiring title to land” (The Constitution of the Republic of South Africa, as paraphrased in Hall & Williams, 2015: 1).

The next question that an international reader may ask, is “when did the land reform debate began to dominate the South African public sphere?” Some might argue that it was with the establishment of the leftist Marxist South African Political party, the Economic Freedom Fighters (EFF) in 2013, as it was a prominent issue in their founding manifesto, stating that “political power, without economic emancipation is meaningless” (EFF Constitution 2014). Others might say that it was even the EFF’s mandate under prominent leader Julius Malema that influenced the ruling ANC to put it on their National Conference Agenda held December 2017 in Johannesburg (Du Preez, 2018).

But commentators are unanimous in their view that although the land reform issue was simmering underneath the surface for a long time, it was not on the cards until the newly elected President of the ANC, and later President of the country, Cyril Ramaphosa formally announced the prospect of land reform without compensation. In the words of Max du Preez (2018), “The genie finally escaped from the bottle when Cyril Ramaphosa was elected ANC president and boldly promised renewal, rehabilitation and change.” As Du Preez (2018) explains, land has become a “primary symbol” of especially black South Africans’ desire for the ‘better life for all’ that the ruling party had promised them all these years. “At the heart of it is the terrible reality that millions of black South Africans still live in shacks in overpopulated, dangerous and dehumanising slums in our cities and towns from where they travel to work four hours every day,” (Du Preez, 2018).

Note the lack of irony to twitter users when, at the height of the debate on South African land reform, Xolisa Dyeshana discovers that a search on “squatter camps in South Africa”, rather presents one with pictures of poor whites instead of their black counterparts. This specific case will be discussed in the following section.

3. The “white squatter camps”-case study

“In this stream of work, the interest might not be in understanding the social powers of the technical systems, but in understanding how the notion of the algorithm itself has a kind of social power,” (Beer, 2017: 11).

Online journalist Gemma Ritchie points out that in the discussion that followed Dyeshana’s initial Twitter post, many users accused Google of advocating the “white genocide narrative” in a quest to undermine land reform in South Africa (Ritchie 2018). Yet many online users since came to Google’s defence by citing the functionality of algorithms. Google have also repeatedly defended their use of algorithms and made a further commitment to continue working on Googlebot (which optimize search results by ranking content) for their image results to represent a “more accurate representation of social realities”.

According to Rogers (n.d.), Google uses a technique called “PageRank” as one of their methods to determine a page’s relevance or importance. He explains that PageRank is like a “vote” of how important a page is by all the other pages on the Web. These other websites give your website a “vote of support” through putting a link to your website on their website. Another method, “personalisation” allows internet companies to sculpt a user’s online experience (including the search results displayed to them) according to their previous online history. This is what Beer (2017: 11) refers to when he explains that “the algorithm can be part of the deployment of power, not just in terms of its function but also in terms of how it is understood as a phenomenon”.

In the discussion thread following Dyeshana’s original post, another Twitter user, Ebrahim Seepe or @katlimen, charged conservative Afrikaner grouping Afriforum of “giving it [it assumedly being the photos or information] to Google when they went to the USA” to raise awareness about white farm murders. In response to this, in an open-ended personal interview with the author, deputy CEO of Afriforum, Ernst Roets (2018a) have distanced his organisation from these claims. Still he believes he has a logical explanation for the phenomenon: “Because of its novelty, white squatter camps are more newsworthy and therefore more articles will be written about them.” In turn this would contribute to the photos being displayed more prominently on a Google image search, because of the algorithmic function. “In a sense we feel flattered that some twitter users think we have so much power over a large organisation like Google, but the reality is far from it. It is important to understand the role of algorithms in digital communication, but currently we are (unfortunately) not at the level where we can use Google algorithms on that scale,” (Roets 2018a).

In an online opinion piece, *Huffington Post South Africa’s* editor-at-large, Ferial Haffajee, uses the “white squatter camps” incident as a case study of how Google’s “easily skewed results” could “spread misinformation” (Haffajee 2018a). She argues that the search engine’s image representation “is a gross distortion of the national data on overall racial demographics in informal settlements and paints a false picture of South Africa’s housing and poverty crisis - but it is the main way that ordinary searchers around the world will be informed of how race is lived in South Africa.” The article’s subheading points out that Google’s “algorithm increasingly runs our lives, yet it appears it can be manipulated by sites peddling racism or false information...” (Haffajee, 2018a).

Haffajee shares a similar sentiment raised by Kiri Rupia in a 2016 *Mail & Guardian*-article, *How does the Google Image search algorithm work - and is it racist?* In Rupia’s article she explains that Google’s algorithms rely on more than 200 unique signals that make it possible for the search engine to *guess* what a user is searching for. The choice of the word *guess* (author’s emphasis) is very telling, as it highlights that the search engine does not make a qualified determination, but rather makes an assumption based on the text and captions “anchoring” the image. As Roland Barthes (1964: 6) aptly put it:

“...anchorage may be ideological and indeed this is its principal function; he text directs the reader through the signifieds of the image, causing him to avoid some and receive others; by means of an oftensubtle dispatching. It remote-controls him towards a meaning chosen in advance” (Barthes, 1964, 6).

Barthes (1964) also points to the importance of “point of view” and “context” in interpreting an image as the meanings conveyed by these “signs” (images) rely strongly “on the cultural and contextual situations in which they reside” (Rinnert & Lane). Therefore, as Rupia (2016) explains, if the “Google Image”-function figures out the content of an image based on the caption, certain biases may arise in the search results. Although most of the online debates have centred on the algorithms being biased, one could rather argue that it is the *data* that is biased, not the algorithms. We will make the argument in the next section, through using different search engines from different countries.

4. Same internet, different search engines and similar racial categorisation

The authors used the same key words, namely “squatter camps in South Africa” in conducting a search on the search engines Google (USA), Bing (Microsoft, USA), DuckDuckGo (USA), Yaani (Turkey), Yandex (Russia) and Baidu (China). We tried to use the Nigerian search engine Naijoo as well, but the “photos” or image function did not produce relevant results. As can be seen from the figure below, all the searches returned similar results on the first page of the search results, albeit at times putting the pictures in a somewhat different order. The Chinese search engine Baidu is not designed to search in the English language and produces somewhat irrelevant results. Therefore, we used “Bing translate” to translate the phrase “Squatter camps in South Africa” to “Simplified Chinese” and conduct the search on the key words 南非寮屋营地 in Mandarin.

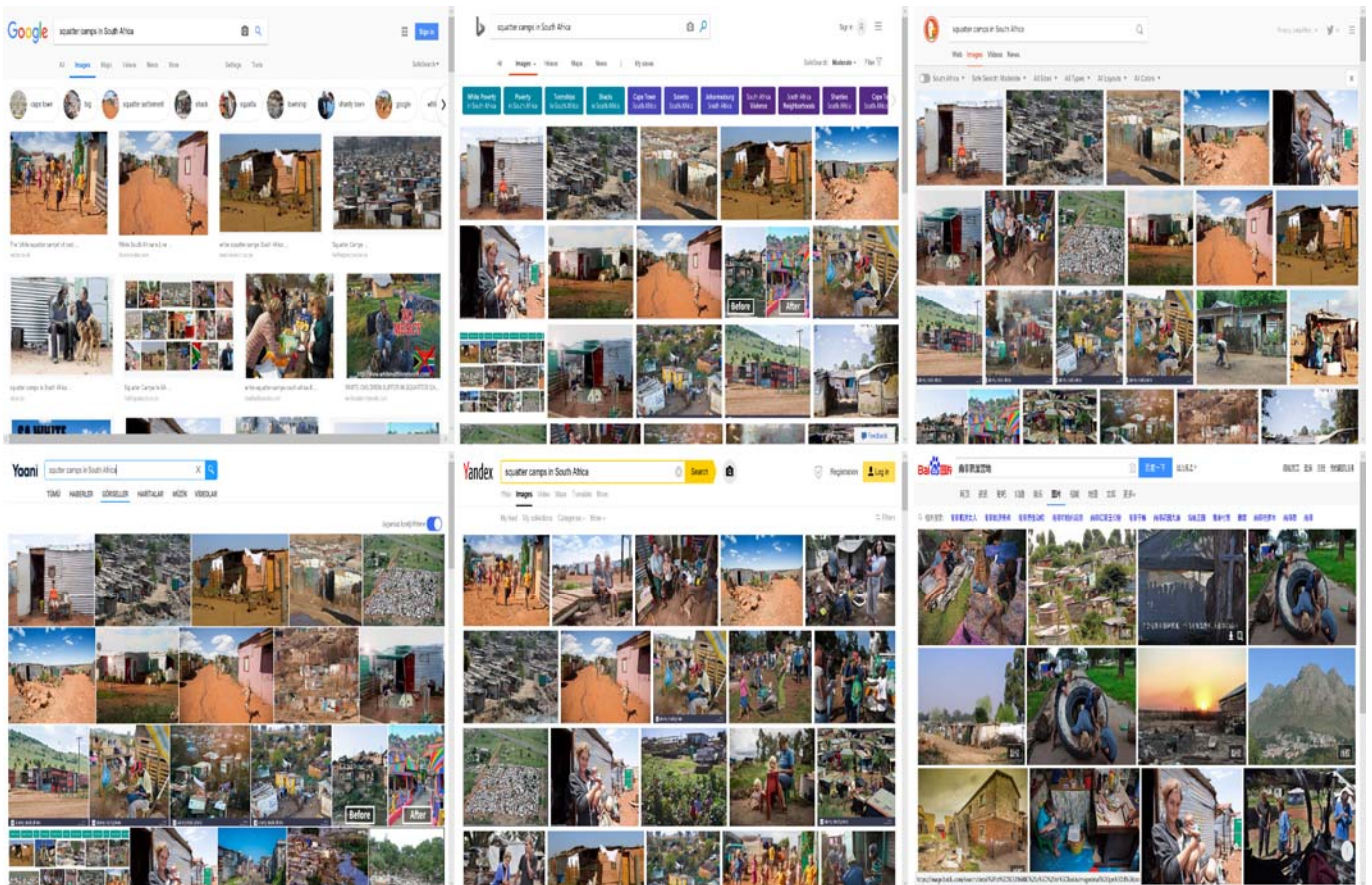


Figure: Same data, same internet, different algorithms. Similar profiling or categorisation

Many of the journalists reporting on the “white squatter camps in South Africa”-incident blamed the algorithms for the search engines’ biased representation. But the six search engines used in our sample originated in different countries and their developers/programmers quite possibly had vastly different training backgrounds. Secondly, the source code of the search engines is not open source; thus, one would not be able to access and download it. Therefore, these search engines cannot influence one another. And even more importantly, because of commercial proprietary or “closed source software”, none of the companies that host the search engines on their servers use the

same algorithms. Taking all these factors into consideration, it seems improbable that the algorithms behind all six search engines displayed the same bias. But, all six of these search engines have one thing in common. Their algorithms learnt how to index the online content based on the data sourced from the internet.

As can be seen in the figure, we ran the same search phrase “squatter camps in South Africa” on different search engines and obtained images with an almost identical categorisation or racial profiling. Thus, if the algorithms are not shared amongst these software companies, then the only thing we can blame it on, is the data itself, which is created by the users of the internet. This is also picked up by Ritchie (2018) who explains, “Google does have some control over its algorithm that creates the biased search results, but it has almost no control over the content that is created by individuals through websites, blogs or forums, and how well connected those sites are.”

Beer (2017: 11) emphasises that “it is easy to get caught up in a kind of sci-fi dystopia of automated machines and the potent powers of intelligent environments. But the relations between power and algorithms require a broad conceptual and methodological palette from which the analysis might be developed.” Rupia (2016) also discusses these aspects her article, *How does the Google Image search algorithm work - and is it racist?* We would suggest that this power relationship could be a topic for broader future research.

5. Concluding remarks

Since the algorithms used within our sample are commercial proprietary, we did not (and could not) provide an in-depth scientific explanation of how each algorithm operates. cannot provide explanation of how these search algorithms work. Making any claim about the operating mechanisms of the search engines such as their heuristics or decision trees would be scientifically incorrect. Our methodology was to qualitatively evaluate their outputs at a certain time.

We focused our attention in this paper on discussing the scientific role algorithms and data in the so-called “white squatter camp”-case study. Our aim was not to discuss the role of political role players in trying to influence the debate. But that does not mean that we are unaware of the fact that role players on the left and right of the spectrum use using social media to advance their own agendas and portray false narratives. Within our research, we even found that the faces of these South African role players often appear in humorous memes and videos, such as the one that can be found here: <https://twitter.com/graemeguerrilla/status/1039829719980621824?s=12>

In the above video a programmer used a clip from the “*He-man*”-franchise, and replaced the head of ‘he-man’, with that of Afriforum deputy chair (and most vocal spokesperson) Ernst Roets. The so-called ‘evil villain’ head was replaced by a picture of a big proponent of local land reform, Julius Malema (leader of the EFF-party). In the clip the two enemies are fighting, and the ‘Julius’-head shouts at the ‘Ernst’-head: “You will never stand between me and my destiny!” This humorous video is but one of the various memes that frequently pokes fun at the role players who take each other on in the social media sphere, and topics concerning ‘white genocide’, ‘farm murders’ and ‘land expropriation without compensatio’” have proven to be favourites amongst creators.

Judging from all these examples, an average online media consumer might think that the majority of South Africans want the government to change the constitution to allow for land expropriation without compensation. Still, in *The Criterion Report* (Vol. 1 No 2), the Institute for Race Relations reveals that “more than two thirds of South Africans believe individuals should have the right to own property, and 90% are *opposed* to the government being able to take away land they own themselves” (IRR 2018). It seems to be in stark contrast to the robust debate raging about the topic on twitter and other social media platforms. This is what Haffajee (2018b) refers to as the “Your timeline, my timeline”-dilemma. She emphasises that one’s social media timeline has a powerful influence on one’s assumptions, but that it is dangerous to conclude that social media is representative of the South African population. According to commentators such as Haffajee and Ritchie, this only confirms the importance of understanding how and to what extent relative powers shape algorithms, and “how algorithms mesh into organisations, routines, decision-making and so on” (Beer, 2017: 11). Algorithmic accountability is important and must be placed on the agenda of digital rights policy-building (Haffajee, 2018a).

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