Searching for BLM:
Search Behavior and Google Results During the 2020 Black Lives Matter Protests

Chau Tong (University of Wisconsin-Madison)

Nick Diakopoulos, Ph.D. (Northwestern University)

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Introduction

- Search is an important information gate-keeper, alongside social media (Newman & Levy, 2014; Newman, Fletcher, Kalogeropoulos, Levy, Nielsen, 2017).

- In this study, we examine search interest as indicators of public attention & opinion (at both individual and aggregate levels) to understand public sentiment surrounding post-Floyd 2020 BLM protests.

- Also, we ask: Do Google Search lead people to different results based on biased queries that people use?

Context: BLM movement and 2020 protests

- The BLM movement is a partisan issue, 87% Democrats indicated "support" towards BLM compared to only 6% Republicans.

- Waves of 2020 protests in the wake of the deaths of Breonna Taylor , George Floyd.

RQs

- To what extent are public attention and opinion reflected in search interest towards BLM?

  - Individual: do reported search queries reflect individual position regarding BLM protests?
  - Aggregate: do aggregate search trends reflect actual public support?

- How do user-biased queries correlate with Google search results? i.e., to what extent do search results reflect user bias?

Methods

- Survey data -> How pre-existing opinion on BLM is expressed in the choice of search queries?

- Google Trends data -> aggregate search interest and external validity to survey data.

- Scraping of Google Search with user-supplied queries -> How information about BLM was returned in the search results.

Survey sample

- 511 respondents from the US via panels provided by Qualtrics in the period of 4 – 30 August 2020 to collect information about their media use and attitudes regarding the 2020 BLM protests.

- To capture search interest, we included an open-ended question asking respondents for 3 search terms regarding the recent BLM protests. The exact wording for the question is: *"We are trying to understand how people seek for information regarding current news events. If you were to conduct an online search to get information about the recent protests, what terms would you search for?"*

- "I support the BLM protests" (0: strongly disagree to 5: strongly agree) (Mean = 2.75, Median = 3, SD = 1.96).

- Search queries were split into 2 groups based on this measure: BLM Supporters (N = 293) and Opposers (N = 218).

- 1,172 search queries (688 from Supporters and 484 from Opposers), after cleaning and removing gibberish or nonsensical answers.

- Finally, text mining technique used to determine n-gram differences in the search queries provided by Supporters vs Opposers.

Google trends data

- We use Google Trends to obtain search volume (in each of 50 US states) for several queries supplied by the two groups.

- This data was then paired with public opinion data from Civiqs (193,405 responses: "Do you support or oppose the Black Lives Matter movement?", daily tracked from April 2017-current).

- Expectations: the degree of support towards BLM in each state should correlate with the search volume for pro-BLM terms in that state.

Google Search results

- 17 "Support" Queries (i.e., queries from the BLM Supporters) and 17 "Oppose" queries to scrape Google search results, using the LinkCoordMin tool (Vincent, 2020).

- Results returned were non-personalized search results.

- Organic results (blue links) from these queries were analyzed in terms of domains and domain bias.

Support queries

- ACAB
- are police that have killed mercilessly being punished?
- can police or local leaders tell us to disperse?
- civil disobedience
- no justice no peace
- systematic racism
- defund the police
- donation links BLM
- equal rights for Black lives

- how many BLM protests have been
- peaceful
- militarize police government surveillance
- police brutality during protests
- police reform
- racial injustice protests
- what are my rights as a protester?
- where can and can't I protest?
- racial equality

Oppose queries

- all American lives matter
- All lives matter
- Black violence
- Blue lives matter
- Cities burning
- current riots
- Dangerous from protesters
- destruction of private properties
- looting

- looting and vandalism in [city]
- police funding
- police injuries
- protesters and crimes
- protesters hurting others
- Antifa
- tearing down of historical statues
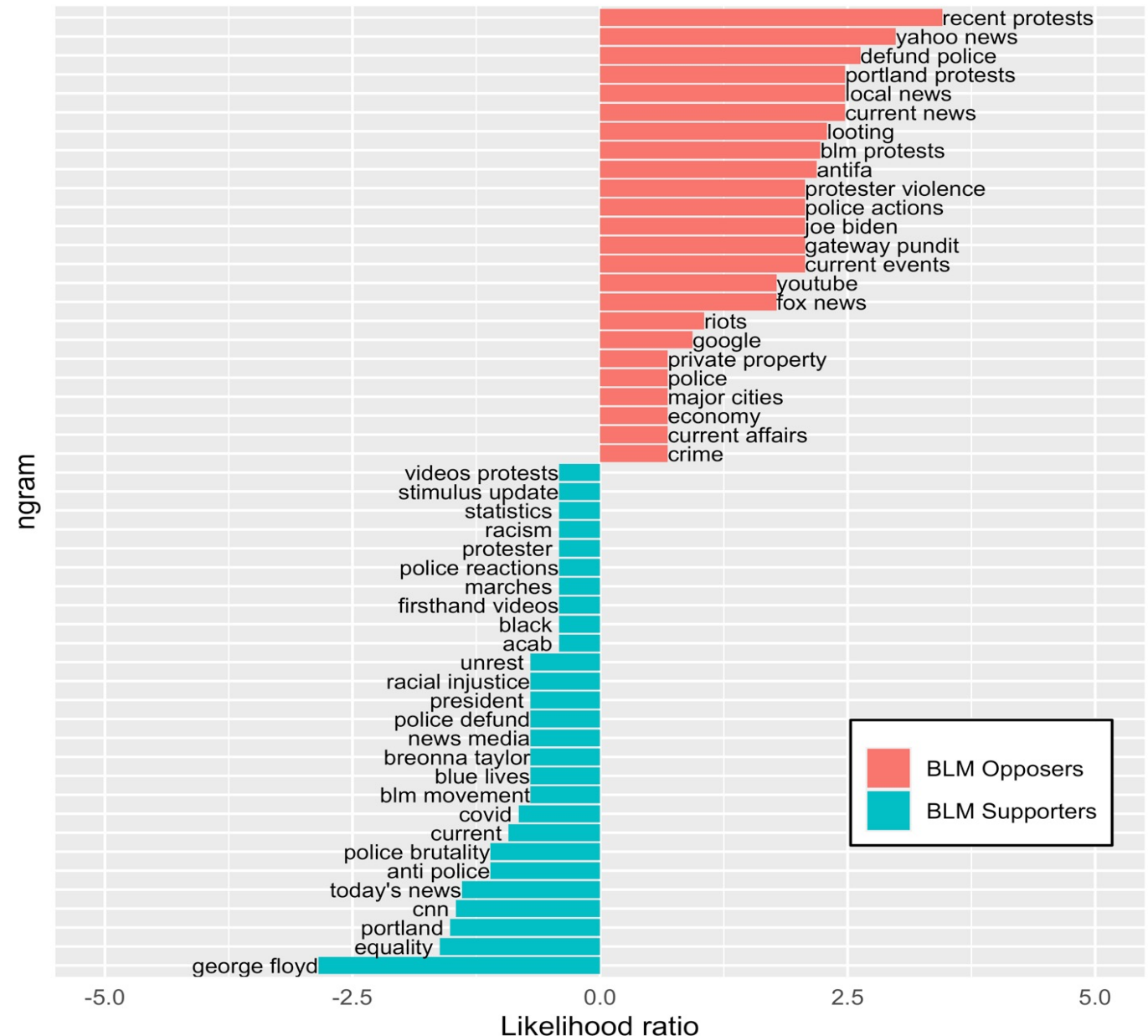- violent protesters damaging properties

Results

"George Floyd", "equality", "police brutality", "racial injustice", etc. were more likely to come from the supporters of the BLM movement.

"Antifa", "looting", "private property" and "protester violence" were seen occurring uniquely in the search queries provided by BLM non-supporters.

-> Search queries regarding BLM solicited from individuals reflect biases aligned with their support or opposition to BLM, even with neutral question wording.

Pearson correlations of search volume
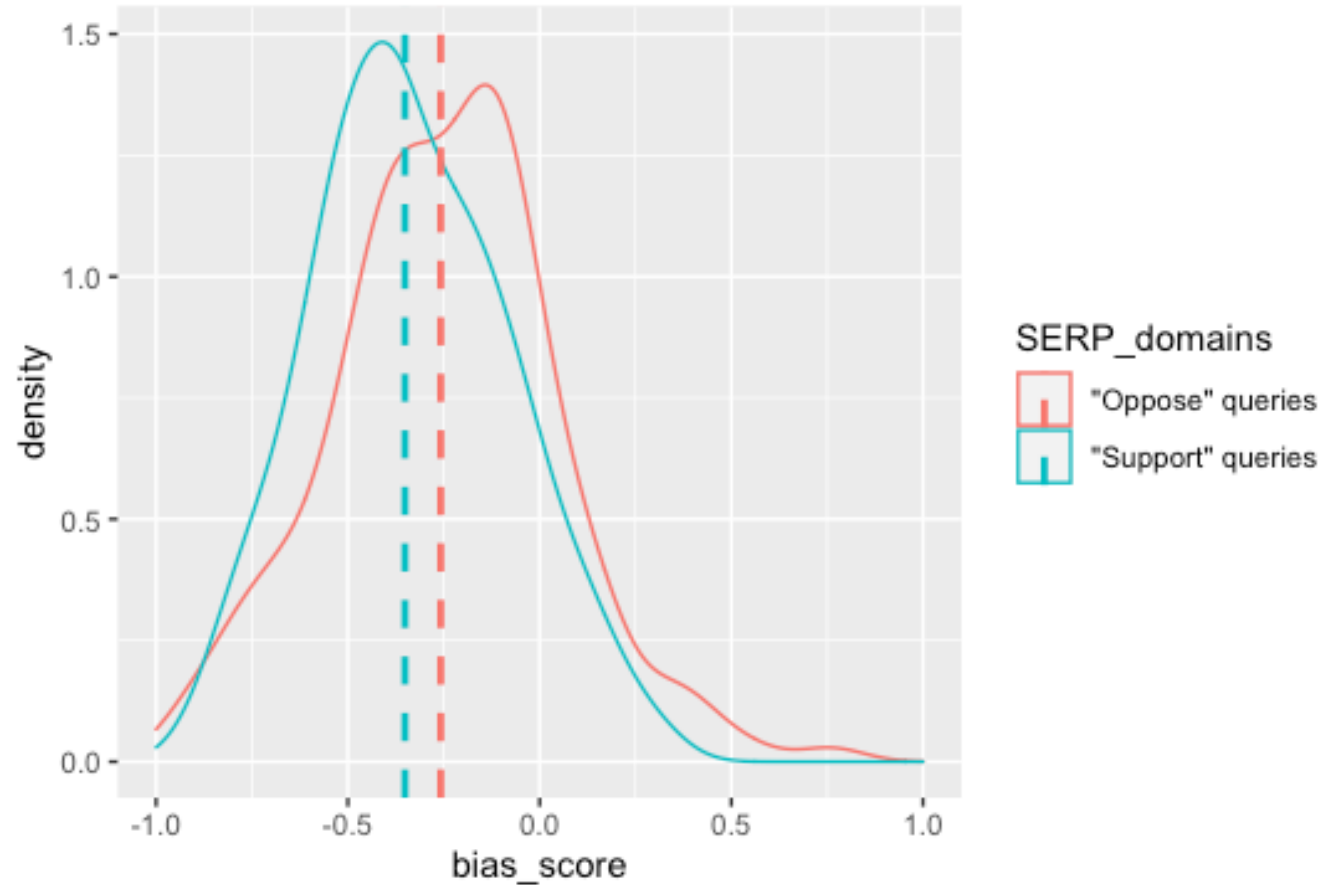## for biased queries and state-level support/oppose towards BLM

		Support % (state)	Oppose % (state)
"Support" queries	'Black Lives Matter' topic	.320*	-.271
	"black lives"	.372**	-.355*
	"peaceful"	.302*	-.275
	"racial justice"	.479**	-.457**
	"police brutality"	.349*	-.347*
"Oppose" queries	'All Lives Matter' topic	-.232	.182
	'Blue Lives Matter' topic	-.216	.201
	"blue lives"	-.154	.157
	"white lives"	-.420**	.387**
	"riots"	-.652**	.675**
	"defund police"	-.524**	.506**

Top domains by query group

Support queries		Oppose queries	
Domain	Occurrence rate	Domain	Occurrence rate
wikipedia.org	.096	**nytimes.com**	.060
cnn.com	.054	**wikipedia.org**	.048
washingtonpost.com	.048	**washingtonpost.com**	.042
nytimes.com	.024	theatlantic.com	.036
theguardian.com	.024	theguardian.com	.036
aclu.org	.024	latimes.com	.030
usatoday.com	.018	cnn.com	.030
fivethirtyeight.com	.018	vox.com	.018
		npr.com	.018

Occurrence rate = ratio of occurrence / total number of URLs. Table shows domains that occur at least 3 times. Domains unique in each list are highlighted.

Political bias of the domains returned by each query group

Domain bias scores were based on domain sharing patterns on Twitter (-1: shared exclusively by Democrats to 1: shared exclusively by Republicans) (Robertson, Jiang, Joseph, Friedland, Lazer & Wilson, 2018).

To sum up

- We found differences in search queries as a function of attitudes towards BLM.
- Search interest at state level generally reflected state support or opposition towards BLM.
- Evidences of both mainstreaming effect and divergence in top Google Search results for Support & Oppose queries.
- Search results for both query groups show an overall left-leaning skew.

Discussion

- Under conditions of no or little motivation, people gave spontaneous query choices that reflected predilections for attitude-congruent information.

- Future research can examine if the tendency to supply attitudinally congruent search queries still holds when survey questions are asked or framed differently.

- Regarding the search results, the findings indicated a strong mainstreaming effect.

- Future studies can look more into the *content* to understand the specifics of how queries shape the content returned.

Thank you!

Please contact cttong@wisc.edu for questions.