

Description querying Facebook Graph API

I analyse media outlets' reporting on terrorist attacks and public engagement with these reports. The proxy for this is media outlets' Facebook activity. Facebook offers several advantages: its member base is very broad, both regarding media outlets and users; it has an inbuilt feedback mechanism of how well-received a post—or here: an article—is; it provides sufficient data below the aforementioned threshold of e.g. government engagement; lastly, it can be queried in a way compatible with large-N analysis. This involves moderately sophisticated, automated querying using *python* to query *Facebook's Application Programming Interface* (API). To conduct the analysis, firstly, the data on terrorist attacks in Western Europe post 9/11 (12.09.2001–31.12.2016) is extracted from the GTD. This defines the relevant cases and contains information on the number of casualties (injuries and fatalities) and the perpetrator group. The data file contains 139 groups of perpetrators, which are categorized according to their ideology (left, right, Islamist, UK separatist: loyalist/republican, and other, see Table 1 for an overview). This data defines the background information of the terrorist attacks; it is used to analyse British and German media outlets' online activity. To account for potential media bias in reporting about events, media outlets of different political leanings have been selected (see Table 2). Using *python* and the Facebook *API*, the Facebook posts of these outlets starting from the attack date and the next 7 days were extracted (see flowchart for the process' technical breakdown). For each post processed this way, the meta information about the attack (attack date, ideology of perpetrator, fatalities, injured)

as well as the information about the post itself—publication date and time, outlet publishing the post and, most importantly, the number of reactions (“like,” “love,” “wow,” etc., comments, and shares) to measure engagement with this post—were collected. This data was cleaned and filtered: firstly, removal of duplicates; secondly, to ensure only posts related to the respective attack were analysed, filtering on keywords (see Table 3 for full list of keywords). Due to Facebook’s popularity for media outlets dating back only until the 2010s, the earliest posts accessed this way date back to 2011, and the most current attack contained in the GTD was recorded in 2016. Therefore, attacks between 2011 and 2016 are covered.

From this, two datasets were created: firstly, *Posts Count*, where each case is one attack. The dataset includes information about the attack and the number of posts made in relation to it. Secondly, *Posts Analysis*, where each case is one post (multiple posts per attack). The information on each post contains information on the attack it refers to and about the post itself. The full code for obtaining the data is referenced in this repository; in short, *Post Count* captures the media coverage (on Facebook) of the events, and *Post Analysis* records the public engagement with it (see Table 4 for descriptive statistics of *Posts Count* and Table 5 for descriptive statistics of *Posts Analysis*). For a description of the data analysis, refer to the separate repository [“facebook-analysis.”](#)

Tables

Category	Groups	Category	Groups
Left	50	Separatist (UK, loyalist)	10
Right	27	Separatist (Non-UK)*	9
Islamist	15	Environmentalism*	4
Separatist (UK, Irish republican)	11	Unknown/Other*	13
(* = category excluded from this study)			

Table 1: Overview of perpetrator categorization for Facebook analysis.

United Kingdom:	Germany:
<u>Newspapers (broadsheet and tabloid):</u> city a.m., Daily Express, Daily Mirror, Daily Telegraph, Financial Times, MetroUK, Mirror Politics, Morning Star, Sunday Express, The Daily Mail, The Daily Star, The Evening Standard, The Guardian, The Mail, The Sun, The Sunday People, The Telegraph, The Times/The Sunday Times.	<u>Newspapers (broadsheet and tabloid):</u> Bild, Frankfurter Allgemeine Zeitung, Frankfurter Rundschau, Handelsblatt, Junge Freiheit, Junge Welt, Süddeutsche Zeitung, Spiegel Online, taz, Die Welt, Die Zeit, Hamburger Abendblatt, Augsburger Allgemeine Zeitung, Freie Presse, Hessische Allgemeine, Kölner Stadtanzeiger, Neue Westfälische, Die Rheinpfalz, Rheinische Post, Stuttgarter Zeitung, Südwestpresse, Westdeutsche Allgemeine Zeitung.
<u>TV broadcasting:</u> BBC news, Channel4, Channel4 News, ITV, ITV news, UKTVnow, Sky News.	<u>TV broadcasting:</u> ARD, ZDF, ZDF heute, Radio Bremen, WDR, WDR monitor, HR, SR, SWR, BR, RDD, RBB24, NDR, SAT1, RTL, ProSieben, Kabel eins.

Table 2: Overview of analysed media outlets.

Positive keywords:	Negative keywords:
terror, attack, Angriff, Anschlag, Anschläge, shooting, Schießerei, knife, Messer, Islamist, Islam, jihad, Dschihad, Extremist	cyber, boko, Niger, Chad, Tschad, Cameroon, Kamerun, Tunis, Tunesien, Iraq, Irak, Afghanistan, Israel, Palest*, Palästina*, West Bank, Jordan, Lebanon, Libanon, United States, Amerika, Russ*

Table 3: Keywords for post search.

Descriptive statistics *Posts Count*

Statistic	N	Mean	St. Dev.	Min	Max
Fatalities	43	16.23	68.47	0	433
Injured	43	4.49	13.31	1	87
Islamist attack	43	0.58	0.50	0	1
Left attack	43	0.05	0.21	0	1
Right attack	43	0.12	0.32	0	1
SEP Loyalist attack	43	0.02	0.15	0	1
SEP Republican attack	43	0.23	0.43	0	1
Separatist	43	0.26	0.44	0	1
Time (YYYY.MM)	43	.	.	2011.07	2016.12
Terror mentioned	43	10.40	15.52	0	96
Post count	43	30.53	36.12	4	207

Note: Each case is one attack. The statistics describe attack attributes and the number of posts referring to it.

Table 4: Descriptive Statistics of Posts Count data set.

Descriptive statistics *Posts Analysis*

Statistic	N	Mean	St. Dev.	Min	Max
Number like	1246	1238.20	3637.90	0	56263
Number love	1246	29.87	283.88	0	8116
Number wow	1246	8.46	73.90	0	2201
Number haha	1246	6.25	38.20	0	807
Number sad	1246	132.67	1314.46	0	34421
Number angry	1246	64.21	768.48	0	21991
Number comment	1246	167.49	813.63	0	19017
Number share	1246	580.38	2851.87	0	62157
Fatalities	1246	25.72	66.19	0	433
Injured	1246	5.18	12.16	1	87
Islamist attack	1246	0.80	0.40	0	1
Left attack	1246	0.02	0.15	0	1
Right attack	1246	0.09	0.28	0	1
SEP loyalist attack	1246	0.003	0.06	0	1
SEP Republican attack	1246	0.08	0.28	0	1
Photo	1246	0.25	0.43	0	1
Video	1246	0.37	0.48	0	1
Link	1246	0.35	0.48	0	1
Time (YYYY.MM)	1246	.	.	201107	201612
Terror mentioned	1246	0.34	0.47	0	1
Combined Reactions	1246	2227.54	7701.43	0	131453

Notes: Each case is one posts. The statistics describe attributes of the attack and the number of posts referring to it. The variables showing the page ID were omitted since they are not meaningful without context.

Table 5: Descriptive Statistics of Posts Analysis data set.