

# Twitter and feminist commemoration of the 1916 Easter Rising

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**T**he centenary of the 1916 Easter Rising was celebrated in 2016, the centrepiece of a decade-long programme of national commemoration in the Republic of Ireland. Marked by digitality and widely declared a success for public engagement with history, the centenary also represented a turning point in an ongoing feminist re-appraisal of the Irish Revolution, one that has been reflected back in

societal shifts concerning the position and freedoms of Irish women today. Drawing upon the primary author's doctoral research, this article demonstrates the methods and collaboration involved in collecting historical tweets from the 1916 centenary via the Twitter Premium API and the ways in which Twitter was being appropriated in critical remembrance and through a feminist lens.

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## 2 Introduction

- 3 Social media platforms are not only spaces in which digital heritage is shared or consumed as participatory arms of cultural entities, but in which remembering takes place, in which commemoration is mobilised such as for feminist historical activism. During the Irish centenary commemorations in 2016, the use of social media as a stage for public debate and a spotlight on women's underrepresentation in the history of the Easter Rising was observed (*Casserty, O'Neill 2017*). The 1916 Easter Rising was a rebellion against British colonial rule in Ireland and it set in motion a renewed military and political campaign for independence, culminating in the Anglo-Irish Treaty of 1921, and the partition of six northern counties. The centenary of this pivotal event was part of a wider programme of national remembrance, the 'Decade of Centenaries,' which began in 2012 in the Republic of Ireland and Northern Ireland. Women were active in all stages of this momentous historical period spanning the European war and the Irish revolution; this included the literary revival, anti-recruitment and anti-conscription campaigns, social reform, socialist movements, nationalist politics and militant separatism, suffragism, the War of Independence and the Civil War (*Pašeta 2013*). However, coupled with limitations placed on the civil rights and freedoms of women in the newly independent, conservative 26-county Free State, they were all but ignored in history and commemoration for the greater part of the 20th century until feminist scholars set about rediscovering their stories. Accelerated by the opening up of two key Military Archives collections from the mid-2000s (*Military Archives 2019*) and part of a wider shift towards public history making and revisiting contested Irish pasts, this flourishing scholarship laid the foundations for a major feminist reappraisal of the revolution in the public imaginary by the time of the hundredth anniversary of '1916'.
- 4 Spurred also by the affective economy of a national period of commemoration, during 2016 a feminist discourse of remembrance was carved out online, reflecting this renewed and expanding historical consciousness of the women who shaped the course of Irish history. Social media is, as Clavert suggests, a tool for the mobilisation and (re)appropriation of commemoration (*Clavert 2018*) and is a particularly 'reactive medium' (*Maynard, Roberts, Greenwood, Rout, Bontcheva 2017*). Twitter thus lends itself to such moments of national remembrance as the centenary of the Rising in 2016 when social media activity peaked. The commemorations were also inflected by contemporary gender politics in the Republic, chiming with Smith's insight that heritage can be 'a powerful resource in the politics of recognition - how certain groups are recognized or misrecognized can have important consequences in wider struggles over resources and equity' (*Smith 2010*). Many gendered grievances against the State in recent years have been mirrored in the demand for a more critical and representative historical narrative and a re-evaluation of whose heritage is valued in national commemoration. Emblematic of this, on the eve of the 2016 commemorations the #WakingTheFeminist movement was born of the national theatre's

commemorative programme and its omissions, drawing attention to inequality in the wider arts and cultural sector and setting the tone for the centenary to come.

- 5 These observations prompted a major aspect of Hannah's doctoral research, upon which this article draws: feminist commemoration through Twitter during the centenary of the Easter Rising (*Smyth 2021*). Twitter is a space in which commemoration, a relationship to the past and by extension collective memory and identities, may be performed, reified and challenged with fleeting intensity. It is an extension of both official and unofficial commemorations that amplify and interlock with online engagement around historically significant moments, and as such is a snapshot of the ways in which publics are critically engaging with the past in the present. As Twitter therefore poses a challenge for memory and digital history, this article demonstrates the ways in which the heritage of the 1916 Easter Rising was mobilised in online discourses about gender politics and national identity.
  
- 7 If social media is both a litmus test for major events or upheavals and a birds-eye view of popular attitudes that coalesce around them (*Myers, Hamilton 2014*), the Irish commemorations have left, and continue to leave, a substantial digital and historical trace of how people engaged with the centenary of 1916: a record of activity in the evidentiary sense but also in the social media sense of user-generated content (*Salmons 2016*). Studies of Twitter and remembrance have tended to focus on the memorialisation of recent traumatic events and less on nationalising, historical commemorations, Clavert's work on the commemoration of the First World War in France between 2014 and 2019 being a notable exception. This longitudinal study is perhaps unique in collecting a dataset of several million tweets based on a national and international period of commemoration, and in its expansiveness, the study also captured a small number of tweets from the Irish celebrations in 2016. Primarily pertaining to the French commemorations, Clavert's study explicitly set out to interrogate the relationship that may exist between commemorations, collective memory, and social networks - specifically Twitter (*Clavert 2018*). At the same time, social media, but especially Twitter, as a stage for debates around gender and sexuality, feminist activism, and racial justice activism has captured the attention of scholars of media and gender studies (*Julliard 2016, Cervulle, Pailler 2014, Clark-Parsons 2019, Baer 2016, Ray, Brown, Fraistat, Summers 2017*).
  
- 8 Alongside scrutiny of its utility in contemporary social justice movements and counter-movements, the historical and archival value of Twitter has long since been recognised in the fraught attempt by the Library of Congress to process the deposit of Twitter's archive of public tweets since 2006, part of a broader drive to archive the web (*Fondren, McCune 2018*). Web archives, inclusive of social media feeds, are increasingly understood as having historical value both for contemporary and future history, as digital heritage collected and preserved in institutional repositories and national web archive collections such as those of the British Library and the Bibliothèque National de France. The National Library of Ireland's 'decade of commemorations' and 'Remembering 1916, Recording 2016' web archive collections (*National Library of Ireland 2019*) reflect both the digital nature of late-modern 'remembrance cultures' (*Pine 2011*) such as in the Irish context and anticipation that they 'will be invaluable primary resources of the future for those attempting to analyse how people interpreted and engaged with the Easter Rising in its centenary year' (*Kunze, Power 2018*). Collecting but also archiving tweet datasets based on keywords or hashtags (as opposed to user feeds) is also increasingly happening outside of formal memory institutions for both research and activism e.g., DocNow (*Documenting the Now 2021*), which includes, for example, a dataset collected around the Irish abortion rights referendum in 2018.

9 In each of these cases, as in the study presented here, Twitter is a useful but biased mirror: it is just one of the social media platforms utilised in such phenomena and it is neither wholly representative of the offline world, nor the internet, nor of all Twitter users (*Ahmed, Bath, Demartini 2017*). Feed or page-based captures are partial and represent the collecting policies and interests of particular institutions (*Clavert 2021*). They are also snapshots rather than complete and searchable sources. Heritage and digital history scholars are well-placed to interpret such sources and these history-making spaces that are being captured by memory institutions, aided by the liberalisation of the Twitter API (Application Programming Interface) since January 2021. At the time of researching and writing the doctoral thesis upon which this article draws, it was not possible to collect Twitter data more than seven days in the past without recourse to a data purchase. Recent changes to Twitter's policy have heralded free and enhanced access to the full historical archive of tweets for academic researchers. Pre-defined datasets are also being compiled and released by Twitter for research around global phenomena like the coronavirus pandemic (*Twitter Developers 2021*). Methodological development and collaboration are, however, needed to make this a wider reality for heritage and historical studies; it is therefore on this status of Twitter as both a data source and historical source that this article pivots.

10 As a researcher with little prior experience of programming, this research question of feminist discourse on Twitter presented a difficult task because, despite an abundance of Twitter studies, little was available in the way of instruction for novices beyond computer science sources. Specifically as it concerned historical tweets, which is to say retrospectively collected, there were no ready-made data collection tools. A key aim of this article, therefore, is to contribute to the documentation of methods for such work. It outlines in detail the methodology and collaboration involved in collecting historical tweets from the 2016 commemorations via the Twitter API v.1 (Twitter's move to v.2 is underway as of 2021) for qualitative analysis of a case study in feminist remembrance. In their analysis of the anniversary of the Fukushima disaster, Rantasila et al. pointed to the need for greater integration of qualitative approaches in network analyses, big-data, and social media research (*Rantasila, Sirola, Kekkonen, Valaskivi, Kunelius 2018*). This study attends to this in the application of qualitative thematic analysis to tweets collected through digital methods in order to interrogate Twitter as it has been entangled with feminism and the mediation of memory during the centenary of the 1916 Rising. A series of vignettes of this intense commemorative moment will demonstrate some of the ways in which Twitter was appropriated for feminist ends. Firstly, however, is a meditation on the ethics of social media research and a detailed account of the data collection that underpins this case study in feminist critical remembrance.

## 11 **The ethics of Twitter as data**

12 Twitter data has, for many years now, been commodified through reselling services as well as restricting free access to tweet data using its Standard API to the past seven days only. As such, a tendency towards topic-based research has been in part a practical issue, as Boyd and Crawford remind, due to these restrictions on historical data collection that Twitter imposed (*Boyd, Crawford 2012*). And while the Cambridge Analytica scandal concerned Facebook and its subsidiaries, Twitter also responded by altering its API management process; as of July 2018, signing up for a Twitter Developers account for API access requires an application and authentication process, and agreement to terms of use that restrict the kinds of research that can be carried out (*Bruns 2019*). Through its Developers service, Twitter offers a subscription-based, three-tier paid access model, the upper ends of which

are for most researchers prohibitively expensive. Though 'Academic Research' had already been identified by Twitter as a significant use case within this framework and prior to the liberalisation of its API access to researchers in early 2021, at the time of the data collection for this research in 2019 free access to tweets was still restricted to seven days in the past from the point of retrieval. Generous doctoral funding allowed for such access, a privileged position within this data-selling and research landscape at the time (*Walker, Mercea, Bastos 2019, Bruns 2019*).

- 13 Infrastructural limitations on social media research also influence the kind of research that can be conducted, and the kinds of questions asked: 'The underlying features of social platforms impinge on research designs and data collection, as one cannot ask questions of data that is not possible to collect' (*Walker, Mercea, Bastos 2019*). Closely related is the 'ethics turn in social media,' *Rogers 2018* as well as the tightening of general data protection regulations (GDPR) in the EU, which, combined with Twitter's policies, impacts the ways that researchers can report their findings. The work of Ahmed et al. is particularly instructive in navigating this terrain. They provide an overview of the main privacy challenges and ethical grey areas in social media research with a focus on Twitter, and is grounded in the approach that 'traditional ethical principles such as consent, anonymity, and avoiding undue harm should also be applied to social media research' (*Ahmed, Bath, Demartini 2017*). Twitter has always maintained that any tweet is public information 'by default' (*Twitter Inc. 2020*) unless otherwise restricted through the user privacy settings. Only public tweets - those not protected by these settings - can therefore be collected through the Twitter API. Policy has since been updated to reflect recent currents in social media data re-use and privacy, re-affirming the public nature of tweets but also that the responsibility for public tweets and how they may be used elsewhere, lies with the user: 'You are responsible for your Tweets and other information you provide through our services, and you should think carefully about what you make public, especially if it is sensitive information' (*Twitter Inc. 2020*). Elsewhere, individual choice and the burden of liability are similarly built into statements about the function of its APIs, where Twitter data is described as 'unique from data shared by most other social platforms because it reflects information that users choose to share publicly' (*Twitter Inc. 2020*). Such nuances are indicative of a hands-off approach by social media companies that operate open and increasingly scrutinized communication environments, as well as tying with Myers and Hamilton's assertion that 'the form of Twitter similarly [to Facebook] embodies classical liberalism by also constituting...the user as an autonomous individual' (*Myers, Hamilton 2014*).
- 14 Advocating for critical and intersectional feminist practice in the use of cultural data, Earhart contends that 'Central to ethical engagement with large datasets that contain individual identifiers, such as is the case with tweets, is careful consideration of the positionality of the researcher and the development of a methodology that protects the privacy of individuals' (*Earhart 2018*). And if the 'process of evaluating the research ethics cannot be ignored simply because the data are seemingly public' (*Boyd, Crawford 2012*), as researchers we cannot operate on the assumption that agreeing to the terms of service of Twitter is a proxy for consenting to be part of a university research project. Though Twitter is by all accounts considered public domain data, it behoves us to adhere to higher ethical standards than the legal technicalities afforded by terms of service (*Ahmed, Bath, Demartini 2017*) that seek to limit corporate liability on the part of companies who profit from user generated data in what is always an asymmetric agreement. 'Sensitivity' of the data will be case dependent, and we should bear in mind not alone the topic of study (in this case commemoration), but the community of study, power dynamics, and our positionality in this equation, and the ways in which we then interpret and narrativize the data (*Earhart 2018*).

- 15 'Participants' are considered to have given general consent upon agreeing to the terms of service, however, it remains unfeasible to obtain specific informed consent from thousands of users that appear in a set of public domain tweets collected by hashtag or keyword research. We can nonetheless respect user privacy and data confidentiality in the ways we conduct and present research, beginning with formal approval of a project by the host institution's ethical oversight, a process that demands significant reflection on the potential consequences of our work (Note: Ethics approval was granted for the conduct of this data collection and analysis by the UCL Research Ethics Committee). Any analysis and presentation of data must be aggregated, without the use of direct quotes or publishing of usernames (with some exceptions) unless with informed consent, a mechanism which should be built into the ethics application and research planning rather than *post hoc*. As Tweet datasets stored offline must be updated to reflect any subsequent account or Tweet deletions, such consent provisions further future-proof publication of the findings that use direct quotes. In this study, any direct references to Tweets use only keywords, are significantly reworded or paraphrased so as not to be reverse searchable. An exception was made for accounts operated by publicly-funded entities such as national institutions, where they are of interest, and 'accounts of public interest' (*Twitter Inc. 2020*) that have verified ('blue tick') status and limiting these to organisational rather than private individuals' accounts, e.g. the account of the official commemorations body @ireland2016. As the topic of research did not fall under any of the categories of highly sensitive information, potential risk to participants through de-identification, reverse-searching of text or a data storage failure was low (*Ahmed 2018*). Data was collected, stored and analysed using an encrypted laptop, and stored securely using the UCL N:Drive research server. Qualitative thematic coding to analyse and report on the data was also drawn from Ahmed's use of the method for researching public health and global pandemics (*Ahmed 2018, Ahmed, Bath, Sbaffi, Demartini 2019*).
- 16 Closely related to navigating ethics and privacy are considerations of copyright vis à vis contemporary and social media data. In the past, Twitter largely prohibited the sharing of full datasets except in the form of Tweet IDs with limits to how many could be shared per 30-day period, and only for non-profit academic research, meaning that even in this form there were technical and legal barriers to accessing datasets and evaluating research (*Twitter Inc. 2020*). Datasets may now be shared with peer-reviewers in the interest of research integrity and transparency, with upper limits on Tweet ID sharing increased (*Tornes 2021*). Nevertheless, the interaction of GDPR, copyright restrictions, and the implementation of a rigorously ethical methodology, creates difficulties for reporting on the data in a meaningful way and given that evidence is the *sine qua non* of research integrity. As one hate-speech researcher had to contend with, the difficulty of obtaining informed consent to publish verbatim hateful Tweet content (considered 'high-risk') and, effectively, the protection of hate-speech producers over the interests of those who are subjected to it, can have profound consequences for the research focus and for methodological integrity, critical inquiry, and justice (i.e., that 'participation in, and gains from, research should be as equitable as possible') (*Bishop, Gray 2017*). Not least out of a desire to accurately represent but also to protect feminist voices, this will have particular resonance for the study of gender and gendered discourse online given the prevalence of mysogyny, trans- and homophobia and anti-feminist backlashes online. For example, some feminists commemorating the women of 1916 through Twitter were simultaneously tweeting support for the abortion rights campaign (known as the 'Repeal' movement) that was ongoing at the time of the 1916 centenary, an issue that continues to prove controversial since the liberalisation of abortion law in the Republic of Ireland. Albeit expressed in mainstream terms or refracted through a positive discourse of commemoration, there was an additional need to protect such users from undue harm. Furthermore, given the still deeply held

conservative nationalist elements of Irish society and the misogyny and extremist anti-abortion campaigning observed in the lead up to the abortion referendum in 2018, reporting this phenomenon in the data required particular attention to the potential risk of harm. In a much broader sense, for the digital historian, this balancing act can create challenges for presenting a compelling narrative rather than quantitative descriptions, which is a methodological and epistemological problem as much as a regulatory one. In the following section, the methods and process of collecting and analysing this historical tweet data are outlined.

## 17 Data Collection

- 18 Data access is the first in a number of steps researchers have to take as they collect, process, validate, interpret, share, and archive the data. These steps often require robust technical skills, as API endpoints for data collection were designed for programmers building application software that adds to the services offered by social platforms (*Walker, Mercea, Bastos 2019*).
- 19 The data collection was carried out by utilising Twitter's 'Premium' API. Using Python, the Premium API was leveraged to retrieve historical tweets from 2016 for analysis. Twitter has provided its own data-selling service called 'Twitter Developers' since 2017, which is subscription-based with three tiers of access to its APIs - Standard, Premium and Enterprise - through its Developers platform. The Premium API provides access to the full archive of tweets since 2006, that is to say 'Filtered access to the entire public history of Tweets through Boolean queries' (*Twitter Inc. 2020*). As well as offering access to historical tweets and enhanced metadata, paid Twitter APIs also afford complete access to matching tweets whereas previously the free API would return an incomplete sample (*Janetzko 2016*).
- 20 The creation of a programme for retrieving data through the Twitter API was a collaborative effort between the authors. For those without advanced technical expertise wishing to conduct social media research that falls outside the standard limitations of free APIs and the affordances of out-of-the-box tools, or who do not possess the skills required to utilise APIs in a timely fashion, collaboration with scholars in computer and data science is increasingly necessary and common: 'collaboration is a normal practice of humanities computing and should therefore be imagined as part of any discussion of method' (*Rockwell, Sinclair 2016*). Rockwell and Sinclair describe a process of 'pair work' that reflects the time we spent in trial and error - Diego at the keyboard, Hannah reviewing and reflecting - discussing, testing, wading through documentation and 'thinking through the code' (*Rockwell, Sinclair 2016*). This was a constant dialogue about how to retrieve the desired data, what form it would take, what limitations we faced or what limitations to place upon the amount and types of data collected (extending into considerations of ethics and privacy), and what we wanted the data to look like after cleaning and processing in order to start making sense of it, and possibilities for analysis. In this way, we produced a programme to retrieve historical tweets through Twitter Developers, and supplementary data cleaning and processing programmes.
- 21 As a reference for designing and modifying the eventual query, the below tweet metadata template was retrieved using the Standard API (anonymised) provides 'deep JSON' (JavaScript Object Notation) or nested information (i.e., multi-level, Russian doll-like), meaning it also shows the elements of the user metadata that may be of interest:

23 While tweets provide a wealth of metadata not all of it will be of use or interest to the researcher, so it was decided to be selective about which to retrieve and to leave out. The programme we created returns only the specific information asked for rather than the full tweet metadata by specifying tweet attributes in the code, which can be modified and expanded easily (*Twitter Inc. 2020*). Requesting the 'entities' attribute returns usernames, user mentions, hashtags, URLs etc. in JSON format that are easily parsed for use later (*Twitter Inc. 2020*). In this way, some privacy and data protection issues can be minimized at the request level, as well as eliminating unnecessarily cumbersome data that ultimately may be not of interest to the research. This was both pragmatic in terms of the research interests and the management of large amounts of data, but also in reducing superfluous personally identifying data that may constitute a privacy concern (*Ahmed, Bath, Demartini 2017*). The following is an overview of the key features of the programme.

## 24 Programme design

25 The Python programming language was used to query and process the Twitter API due to the availability of a wide variety of libraries to collect, clean, and process data. Tweets are obtained through queries performed using the *TwitterAPI* library, which encapsulates all the required functionality to request tweets from the Twitter API (This may lend itself to some confusion, since the name of the Python library used to query the Twitter API is *TwitterAPI*. Aside from the spacing difference, references to the Python library will appear in italics).

This library uses a set of access codes generated in the Twitter Developer's portal to authenticate the requests to the Twitter API (`api = TwitterAPI(("XXX", "XXX", "XXX", "XXX", auth_type='oAuth2'))`). Aside from the authentication tokens, it is necessary to create a label to refer to the subscription plan or product contracted in the Twitter Developer portal (`LABEL = 'Pilot'`), as well as the product type. The product type refers to the type of history that can be queried, where the two options at the time of this research were to query tweets from the last 30 days or query the full history of tweets (`PRODUCT = 'fullarchive'` or `PRODUCT = '30day'`).

27 The final step in this process was to create and insert a 'query' i.e., search terms, using keyword combinations and hashtags to match the request with desired tweets (`SEARCH_TERM = '#keywords lang:en -is:retweet'`). The structure of the queries used in this research will be described in more detail in the next section.

29 As stated above, when the programme is run it creates a new .CSV file into which the data is exported, and which can be modified to begin a new dataset as required (e.g., `file_name = 'output.csv'`).

31 Next, we created a metadata dictionary. The metadata include the Tweet ID (string of numbers), date (date and exact time stamp of when the tweet was sent), location (the area the user specifies in their bio, e.g. 'Co. Dublin'), the tweet favourite count, the number of retweets, and language, together with the full text of the tweet and additional information about the tweet and the user who published it:

33 These parameters set the column headings within the CSV that is produced, such as the test example below ([figure 3](#)). The limitations of the API at the time of retrieval and the ways in which the tweet metadata retrieved have been structured and filtered necessarily produces a more limited representation of the potential dataset. At the time of collecting this data it



was not possible to collect tweet replies through the Twitter API, restricting what could be said of any anti-feminist or counter-discourse in this commemorative space, a point that will be returned to below. Furthermore, just as any visualisations or graphical transformations of the dataset elements will be a mediated representation the 'dataset is already an extraction from a corpus, text, or aesthetic work, and a remediation' (Drucker 2015); in other words, as Drucker points out, it is already a 'derivative' (Drucker 2015). These practical and representational limitations need to be acknowledged and accounted for in both the collection of data and the inferences we make from it.

- 35 Running the programme repeatedly and specifying the same file continues adding data to this file from the point it finished in each previous request. This is a necessary step due to the limited quotas defined in the Twitter API.
- 'Rate limits' - the number of requests that can be made through an API per unit of time - are much higher with Premium level access (Twitter Inc. 2020). There is currently an upper limit of requests of 60 per minute and a maximum number of Tweets per request of 500 for the Premium subscription plan. To maximise the number of tweets obtained per query to the API, 60 requests are automatically submitted each time the programme is run (`NUMBER_OF_REQUESTS = 60`), which amounts to 30,000 tweets. Monthly limits also apply (Twitter Inc. 2020). Each new request begins from the last tweet in the previous request without duplicating the last tweet. The first column in the CSV therefore counts the tweets in each request and shows where each new request begins, looping from 499-0 each time. Tweets are returned in reverse chronology, starting from the most recent tweet.
- 37 Most importantly, the Premium API 'Full Archive' endpoint allows us to request tweets from a specific time period using the `fromDate` and `toDate` parameters (Note: An 'endpoint' refers one end of a communication channel, which moderates the kind of data can be accessed through the API) (Twitter Inc. 2020).
- Given that all collected tweets are written to a single CSV file, every new request needs to start at the exact date and time in which the last tweet collected was published. This allows the collection of tweets chronologically and in a way that avoids duplicates and ensures no tweets that match the query are skipped. If the CSV file is empty (`if os.path.exists(file_name)` evaluates for `False`), i.e. when running the very first request, the `toDate` is the parameter that is specified by the user when defining a date range (`date = 'YYYYMMDD0000'`). If the CSV file exists, the publication date and time of the last tweet recorded in the file is read and incorporated into the `toDate` parameter in the query.
- If the date of the last tweet extracted is earlier than the `fromDate` specified by the user, that implies there are no additional tweets to extract in that time period. The programme then stops making additional requests (`if int(date) ≤ int(from_date): break`).
- 39 The information described earlier is used to construct a request to the API. `PRODUCT` and `LABEL` information are used to define the database and account, respectively, to direct the request to. After determining *where* to retrieve tweets from, the next step is to determine *which* tweets to retrieve. This is specified by a combination of the search query (`SEARCH_TERM`), the date ranges (`from_date`, `date`), and the maximum number of tweets to retrieve (500 is used to obtain the largest number of tweets allowed by the API). The following line of code sends the request to the API and places all of the results that are received in a variable (`r`) for subsequent manipulation.
- 41 The results stored in `r` contain all of the tweets from the request, and we receive all of the publicly available information for every tweet, such as information about location, retweets, number of times it has been marked as favourite, and the metadata of the publishing user.

Every tweet is processed inside a for loop, for `item in r:`, that iterates through every tweet stored into `r` and uses `item` as a temporary variable that contains an individual tweet. The `item` variable contains all of the aforementioned information about the individual tweet which it stores in a dictionary format, meaning that every *value* related to that tweet is stored as an *entry* that is associated with a particular *key*. For example, a tweet that has an ID of 24 (in the internal Twitter database) will store the number 24 inside the dictionary entry related to the `id` keyword: `item["id"] = 24`.

There is a substantial amount of information associated to any particular tweet, so we decided to only store the most relevant information for our research goals. The way this is done is by adding the information from the *columns* in the source data (`item`) into our predefined metadata dictionary (`dict_`). Our `dict_` object is not a simple dictionary, but a dictionary of lists, what this means is that, for every key, we keep a list of values, one for each tweet processed. In this sense, the dictionary entry for tweet IDs would look something like this: `dict_["id"] = [24, 12, 153, 221, 9, ...]`. Adding a piece of information from the source to our dictionary is therefore not a simple value assignment, but rather amounts to *appending* a value to a list. For the tweet ID, this is done in the following line of code: `dict_["id"].append(item["id"])`.

Many of the fields only need to be copied over to our dictionary. Other fields, however, need to undergo additional operations to get the data in the right format for subsequent storage. Text fields, such as the text of the tweet or the location, need to be encoded into UTF-8 before we save them to our CSV file `text.encode(encoding='utf-8', errors='ignore')`. Certain fields contain additional structured information in [JavaScript Object Notation \(JSON\)](#) format, so in these cases the data needs to be *parsed* so it can be stored in a usable format: `json.dumps(item["entities"])`.

We store information about the requests from which every tweet came, such as the number, time, and date of the request (`str(i+1)+' - '+now`), and the query that was used to obtain them (`SEARCH_TERM`).

Additionally, we wrote in an option to anonymise all user handles that appear in the text of a tweet (`re.sub(r"(?:\@)\S+", "@USER", item["text"])`), although we are not currently using that option (the line is commented out in the code).

- 43 After iterating through all of the tweets returned by the request and storing them in our predefined dictionary they are converted into a [pandas DataFrame](#), a tabular format where every tweet corresponds to a row, and every field defined in the vocabulary is mapped to a column. Additionally, an index column is added to the DataFrame to keep an internal consecutive identifier for the tweets retrieved (`pd.DataFrame(dict_, index=indices)`). The completed DataFrame is then saved to the pre-specified CSV file.

## 45 Query Design

- 46 Boolean search queries were created for requesting Twitter data around distinct topics of commemoration. With a character limit of 1,024 these queries consist of a mixture of hashtags, keywords and keyword combinations using rules such as the 'OR' statement, double quote enclosing (exact match) and parentheses to structure more complex combinations. These were arrived at using the 'snowballing' technique to gather relevant hashtags and keywords via the Twitter interface. Unlike phenomena such as #Brexit and #Covid19, the Irish commemorations have generated a much small number of tweets that could be retrieved using a few hashtags alone. A broad query base using keyword and hashtag combinations was required to capture as many tweets as possible. Many of these revolved around commemorative or historical connotations like #Womenoftherising or #1916centenary, extending to subdiscourses and other significant related issue spaces

(Rogers 2019) like #WakingTheFeminists. Specific historical actors like Constance Markievicz and feminist nationalist organisations like Inghinidhe na h'Éireann (Daughters of Ireland) were also included to further widen the net of tweets.

47 A filtering statement was used to remove a 'bot' identified in the testing stages using the '-from:userhandle' statement was necessary after the identification of a 'bot' in the testing stages whose automated tweets visibly skewed the data. Spam and link-baiting may occur around highly-used hashtags (Ahmed, Bath, Demartini 2017) and a case of this was identified. The 'bot' in question had repeated hundreds of variations of the same tweet based on a line of the 1916 Proclamation of the Irish Republic throughout the 2016 year. It was possible to filter out at the point of retrieval by altering the queries thereafter (albeit eating into the query character limit). However, these kinds of automated accounts can interfere with the veracity of analyses and results, as was observed when a simple word cloud and word frequency analysis was carried out using Voyant Tools (Sinclair, Rockwell 2020), which can be installed and run locally and modified to secure the data on the local server. English was specified for consistency ('lang:en'). Relevant Irish language tweets were therefore not captured in this study, however, hashtags using Irish language e.g., #Mná1916 attached to English-language tweets were retrieved. The following query was constructed to create the 'Women of 1916' dataset from 1 August 2015 to 1 January 2017:

49 While the Twitter Developers 'Sandbox' (see below) was used mainly to test and refine the functionality of the Python programme (figure 3) using only two or three hashtags at a time e.g. #Dáil100, the public Twitter search function also has much utility in creating and refining complex search queries. As these queries can become very complex with the use of multiple rules and combinations, the public search tool was used to simultaneously build and test the queries before implementing them. Although the character limit is smaller, this allowed us to check that queries, or sections of queries, functioned correctly and returned the expected results, somewhat circumventing the limits of the Sandbox. The Twitter search function recognises the same rules and allows us to check that combinations are correct and the 'advanced' search option permits the exploration of search terms and historical tweets within certain date parameters.

51 The queries for this data collection were designed for feminist commemoration as a significant focus; other researchers might create different sets of search parameters around the same centenary and the same issue, and create several different datasets. Search queries are, in this way, somewhat idiosyncratic. And while the ability to share datasets in the form of Tweet IDs is undoubtedly beneficial, they cannot be altered to include missing hashtags or keywords deemed essential by another researcher. No such query-specific collection of tweets will be complete or wholly representative. Providing lists of hashtags and keywords used to create such datasets is important for understanding the scope of data retrieved as well as illustrating the limitations of thematic query-based datasets.

## 52 **Data pre-processing and analysis**

### 53 **Data Cleaning**

54 The tweet statement was the primary vector of analysis in this study and the most important units of data were therefore text, user mentions and hashtags, and to a lesser extent URLs, and emojis. To be cognisant of Twitter as a medium we must account for the

embeddedness of such supra-textual features as hashtags, or ‘natively digital objects’ (Rogers 2019), which are also user-generated by design and therefore more meaningful than simple tags, and which constitute a tweet as a message. Different permutations of the cleaning process are possible, though removing URLs, retweets, and other ‘noise’ in the text take priority. The following Python programme written by Diego can remove HTML, remove or retain retweets, URLs, hashtags and user mentions as required and writes the ‘cleaned’ data to a new file. This text cleaning script is structured like a waterfall, where the result from the first stage of cleaning (`result = text.replace('\n', ' ')`) is fed into the second stage and stored in the same variable (`result`), and this is repeated for every stage of the cleaning process.

- 56 Emojis are common in tweets and presented as ‘encoding failures’ Rockwell, Sinclair 2016 in the cleaned text. This was dealt with by modifying the encoding format from ‘utf-8’ to ‘utf-8-sig’ for both reading and saving all new CSV files (e.g. `open(file_name, 'r', encoding='utf-8-sig')`).

The following Python script reads in a CSV file containing the extracted tweets (with `open(file_name, 'r', encoding=...)`, reads in the file's header (`header = next(data)`) and structures it into a dictionary (`cols = {col_name: col_num ...}`), and goes through the contents of the file, one row (i.e. tweet) at a time (`for row in data:`). A check is performed inside this loop to remove retweets from the final results by skipping any tweet that starts with 'RT' (if `row[cols['text']][2:5] ≠ 'RT ':`). For every tweet in the CSV file, this script performs a text decoding step (`text = ast.literal_eval(...)`), and subsequently cleans the text with the cleaning function that was just described (`text = clean_text(text)`). Note that this stage is only performed on the text and location columns of the tweet, since this is not necessary for the rest of the data. The decoded and cleaned tweet is then appended to a list (`decoded_row.append(text)`) which is in turn used to write all of the decoded and cleaned tweets to a new CSV file (`writer.writerow(decoded_row)`).

## 58 Data Parsing

- 59 A second programme was written to transform the cleaned data into a manageable format for analysis. Making use of the ‘entities’ collected for each tweet, user mentions, hashtags and URLs were parsed and tabulated (figure 5). Entities are presented in JSON format (linear) in the dataset and simplify the work of extracting items of interest such as hashtags as they are in a way pre-processed. In other words, they provide ‘metadata and additional contextual information about content posted on Twitter’ (Twitter Inc. 2020) as a ‘series of defined attributes and values,’ (Murthy 2016) e.g.:

- 61 Entities may also include information about media types, urls, and descriptions (e.g., image dimensions), known as ‘objects.’ This parsing exercise is useful for aggregating certain types of data within tweets, as well as a critical step in coding tweets qualitatively. The date-time format was also modified to DD-MM-YYYY.

- 63 The output of this processing is a streamlined tabulation of the data:

- 65 Table 1 is a summary of the corpus of tweets. The smaller dataset was the object of the qualitative thematic analysis and the findings outlined below:

- 66 DATE RANGE|DESCRIPTION|TOTAL TWEETS|RETWEETS REMOVED ---|---|---|--- 1 Jan-31 Dec 2016|Easter Rising 2016|399,205|139,809 1 Aug 2015-31 Dec 2016|Women of 1916|45,564|10,981

## 67 Qualitative thematic analysis

- 68 This analysis of tweets was entered into less with presumptions of ‘discovering’ something that would have been impossible through a traditional reading and more with the expectation that it would confirm or substantiate certain hunches and generate new ways of thinking about and interpreting them (Sinclair, Rockwell 2016). Drucker has convincingly argued that automated methods and visualisations are at their core unnatural to humanistic inquiry (Drucker 2015). Any analysis of Twitter data must be prefaced by critical reflection on the ways in which meaning can be derived from computer-assisted methods. Automation of certain tasks allows us to probe and get to know the data in more focused ways. What the results of these automations and visualisations mean, however, is not self-evident, and it is up to the researcher to contextualise, interpret, and map them against other data and analyses: ‘We use tools not to get results but to generate questions... [computers] do not produce meaning - we do’ (Sinclair, Rockwell 2016). In this sense, Sinclair and Rockwell have suggested that text analysis tools are ‘Hermeneutica’ - interpretive aids for ‘thinking through’ data, and which can ‘help us try to formalize claims and to test them’ (Rockwell, Sinclair 2016). Further, any visualisations presented here are intended as storytelling aids and are not literal representations of reality. Word and hashtag frequencies provide a starting point to navigate the data in search for the most salient patterns, such as recurring themes or term co-occurrences. As a second level of analysis, the collected tweets are used to construct a network of interconnected terms (words or hashtags), and the visualisation of the connections in these graphs can evidence underlying clusters of (sometimes seemingly unrelated) terms. As Boyd and Crawford have outlined, ‘big-data’ research is, from the formulation of a hypothesis, an interpretive process (Boyd, Crawford 2012), as demonstrated above in the retrieving of the dataset itself. Though not small enough as to allow for purely qualitative methods, this was, in the scheme of things, a little data study. A sample of 10,000 Tweets, after the removal of retweets, proved an ideal number. Too small and (remembering the repetitive nature of commemorative tweets) we may struggle to identify and demonstrate meaningful findings. Too large and the challenge of close reading becomes proportionately more difficult. Software and computing power may also fail in the attempt to work with very large datasets, which may be somewhat mitigated by using a more powerful (and secure) university server.
- 69 The Twitter data collected was coded using qualitative thematic analysis aided by NVivo software. NVivo is a ‘qualitative computing’ (Pickard 2013) software package for working with qualitative data. A body of tweets does not, however, present a linear narrative that can be inspected in the same way as interview transcripts or policy documents. Word frequencies and text queries were used as a springboard to thematic coding. These were saved iteratively as nodes and sub-nodes i.e., coded in order to study the ‘key word in context,’ (Rockwell, Sinclair 2016) some tweets added *ad hoc* as appropriate. The initial coding was inductive and code labels assigned *in vivo*, which were added to, revised, and rearranged into themes and sub-themes, eventually amalgamating into five major areas of interest. Inseparable from the theoretically driven research questions and the philosophical assumptions of the researcher, coding became an increasingly interpretive method as the organisation of data progressed. Data, after all, are not ‘coded in an epistemological vacuum’ (Braun, Clarke 2006). Additionally, as tweets are less dynamic in content than free flowing speech or literature, the initial coding may not necessarily result in the extremely large numbers of nodes that often represent the first layer of interpretation of spoken word data or reams of policy documents, and this will further depend on the point at which we reach saturation. It is not claimed here that every possible detail was gleaned from this handling of the dataset, nor that every single tweet was coded. Rather, a point was reached when little new was being found or adding to the nodes significantly. With the reiteration of these

nodes and sub-nodes, note-taking and aggregating, the narrative began to take a clear shape.

- 70 Myers and Hamilton caution that a greater historiographical awareness of social media as primary sources must include the ways in which social media are narrativized (teleological, technological determinism, technological dystopia), but also ‘how they themselves narrativize and thus help produce the processes of interest’ (Myers, Hamilton 2014). This has implications for how we understand the effectivity of such platforms when we study their use in commemoration. Twitter is a highly performative space comprising multiple tensions and contingent on the conventions of its use (character limits, hashtags, likes, retweets, media sharing, etc): ‘Platform characteristics are critical for understanding how users create, share, interact with, and mobilize content as well as for understanding how community is created and maintained in different platforms’ (McCay-Peet, Quan-Haase 2016). Commensurate with these conventions and culture of use, Twitter is also a reductive medium through which very short statements attempt to convey a much more complex meaning and reality, thus highly susceptible to lack of nuance. Clark-Parsons, in an analysis of #MeToo discourse on Twitter, reminds of how hashtags may overly simplify and even undermine structural change; tweets, as much as the hashtags they produce, ‘trade on short but compelling narratives’ (Clark-Parsons 2019). This centennial corpus originated from pre-280 character Twitter, with even less room for complexity, and narrative derived from these ‘texts’ must be tempered by such limitations. The potency of such messages is nonetheless valid when we read them with a cognisance of the boundaries and culture of the medium and situate them in their broader social and historical contexts.

## 71 Findings: #womenof1916

- 72 Twitter was, in 2016, a space in which historical feminism was being expressed through commemoration. Demonstrably, it was a space in which what Erll and Rigney call the ‘social performance’ of memory was taking place. This social performance of memory constitutes ‘the ways in which particular memorial practices are taken up in the public sphere and hence become collective points of reference’ (Erll, Ann Rigney 2009) and this played out through a politics of representation and critical remembrance during the centenary of the 1916 Rising. Below is a keyword summary of the major themes as well as top hashtags and word frequencies derived from the data:

- 73 Historical Information|Centenary Commentary ---|--- factual|commemoration quotations|celebration live-tweeting|remembering stories|memory GLAMs|events role of women|recognition  
Absence|Affect|Equality ---|---|--- airbrushing|pride|feminism silencing|honour|gender erasure|legacy|fighting forgotten|bravery/heroism|freedom/liberation recognition|inspiration|the proclamation

- 74 Term|Count|Word|Count ---|---|---|--- #womenof1916|1070|women|4750 #easterrising|413|1916|3480 #ireland2016|247|rising|2389 #1916rising|245|markievicz|2050 #internationalwomensday|233|easter|1808 #iwd2016|188|irish|1441 #wakingthefeminists|172|countess|1273 #ireland|138|cumann|945 #rebellion|110|constance|927 #women|106|mban|926 #cumannnamban|101|men|730 #irish|90|years|704 #irishhistory|87|via|702 #birthofanation|79|woman|698 #onthisday|79|grace|688 #womenoftherising|78|100|674 #dublin|69|still|600 #markievicz|65|fighting|552 #easter1916|55|gifford|538 #history|54|ireland|493

#iwd16ni|50|margaret|449 #women1916|49|today|419 #otd|48|skinnider|418  
#feminism|46|olivia|414 #1916live|44|plunkett|404 #womenin1916||44|great|403  
#repealthe8th|40|dublin|352 #rising|37|day|349 #rte1916|36|O'leary|346

75 The conventions of historical commemoration are represented in the two major themes that emerged: 'Historical Information' and 'Centenary Commentary,' and these account for the largest number of the tweets. Together these make for a preponderance of official and organised tweets - information, events, and news sharing - and significant repetition even with retweets systematically removed. Link sharing direct from news sources, online petitions, and automated duplication of tweets create repetitions, but often contain supplementary text or hashtags of interest. Firstly, the repetition of historical facts and statements that characterise commemorative and historical Twitter represents the scale of engagement with the commemorations, and with particular historical phenomena. Such statements and 'invitations to remember' (*Rantasila, Sirola, Kekkonen, Valaskivi, Kunelius 2018*) are also part of a 'ritual discourse' (*Rantasila, Sirola, Kekkonen, Valaskivi, Kunelius 2018*) of commemoration, and are constitutive of the tensions between remembering and forgetting. Further to this, 'Absence' - critique of historical and continued erasure of women from history - 'Affect' - expressing a relationship with the past through expositions of pride, honour, inspiration - and 'Equality' - critique of gender inequality in the present through the prism of commemoration - emerged as substantially recurrent concepts, intertwined with ritual commemorative commentary and historical information transmission. Space does not permit a full recounting of this analysis here. The following therefore details a selection of the findings from the qualitative coding and analysis of this issue space that capture some of the key tensions and the political and affective capital of commemoration in this space. Focusing firstly on historical and commemorative commentary, two moments within the theme of 'Equality' are also detailed: #WakingTheFeminists and International Women's Day.

## 76 Making women visible

77 | To demand visibility is to demand to be seen, to matter, to recognize oneself in dominant culture *Banet-Weiser 2018*.

78 Twitter is, above all, a platform for information transmission (*McCay-Peet, Quan-Haase 2016*). Historical information was therefore key to this politics of information, contesting historical absences and making women visible. Remembrance is recognition: statements of remembrance, and of the imperative to remember - but equally not to forget - the women of 1916 spoke to a politics of visibility and representation. This pivoted on the *role of women* in the Easter Rising, highlighting their activism and contributions through historical statements and commenting on the memory politics of the past and included factual Tweets, for example, historical quotations, and 'live-tweeting' historical moments:

79 | @CenturyIRL: Elizabeth O'Farrell, nurse and Volunteer, leaves #MooreSt carrying a white surrender flag #1916LIVE

80 Information about Cumann na mBan (Women's League) and female rebels and revolutionaries constituted much of these tweets with an emphasis on telling their stories and commemorative cultural productions inspired by them. The suffragism of many of these women also featured, some tweets looking towards the 2018 centenary of partial women's suffrage in terms of how it would be adequately commemorated. The complexity of women's involvement in Easter Week 1916 is necessarily lost in the reductive nature of Tweets, and

indeed we cannot expect such complexity of this medium. Of greater interest is how people engaged with and understood these historical roles and their consequences for the course of Irish history and gender politics up to the present day, and how they expressed these meanings through the medium of Twitter. Many tweets characterise the contributions of women as 'brave,' 'vital,' 'key,' 'integral,' 'critical,' or 'central.' A distinct tension emerged between the 'forgotten,' 'untold,' 'ignored,' 'unknown' or 'hidden,' and the remembering, recognition, retelling, celebration and reclaiming of women's roles and stories. With a dual function of public history-making and critical commentary (Casserly, O'Neill 2017), feminists were making visible both the politics of the past and that which was marginalised in the revolutionary narrative.

- 83 'Centenary commentary' can be divided between the subset of themes 'commemoration,' 'celebration,' and 'remembering' and in each case invitations and obligations to remember, commemorate and celebrate were salient. Commemoration, broadest of these, includes information, announcements about, and invitations to, events such as for International Women's Day, commemorative ceremonies such as wreath-laying and plaque dedications, commemorative campaigns, craft, theatre and musical performances - all of which pay homage to, highlight and explore the role of women in the 1916 Rising. Pride, honour and concomitant expressions of emotion and overwhelmingly positive sentiment towards the commemorations and related cultural productions were also a feature of this sub-theme. Cultural productions such as theatre and musical performances as modes of remembering, celebrating, and commemorating individual women are similarly well received in this issue-space. One exception was the TV mini-series *Rebellion*, aired between February and March 2016, which dramatized the Rising largely from the point of view of three fictional women. This received a more ambivalent reception, with some tweets appreciative of the female perspective yet critical of the somewhat ironic exclusion of nurse Elizabeth O'Farrell, famously 'airbrushed' from a *Daily Sketch* photograph of the surrender scene in a report on the insurrection in 1916. This 'airbrushing' (though contested) has become emblematic of the side-lining of women in Irish history, and was prevalent in the discourse of absence in this issue space.
- 84 Also included is commentary on the inclusiveness of the centenary programme, comparisons with the position of women in the 1966 fiftieth anniversary commemorations, and repeated declarations that 'finally' these historical women and their roles in the foundation of the State were being acknowledged. A sense that women had at long last become 'worthy' or deserving of recognition also emerged in relation to this unprecedented public and commemorative attention.
- 85 | @ireland: The #womenof1916 is a central theme of #Ireland2016 commemorations.
- 86 However much the Expert Advisory Group on the commemorations insisted against celebratory notions of official remembrance, haunted by the excesses of 1966 that were retrospectively blamed for stoking the outbreak of the northern 'Troubles,' the centenary as a 'celebration' was apparent in the prevalence of the term in this issue space, as well as the larger dataset. Mainly, these statements were concerned with celebrating particular women, such as Constance Markievicz, Cumann na mBan, the role of women in the Rising more generally, their bravery and legacies, and events dedicated to their valorisation.
- 87 | @ireland2016: This year we remembered the bravery and idealism of the women of 1916 and honoured the women of today.



88 Many declared their remembrance of the courage and sacrifices of women and men involved in the Rising, describing them variously as ‘heroes,’ ‘patriots,’ ‘courageous,’ and others still referred to honouring their memory, and paying tribute or homage to their memory. Recognition was again expressed as something long-awaited and justified. Still other tweets reminded that we must remember the issues that women face *today* even as we commemorate 1916 and its female protagonists, that indeed these contemporary problems are linked with the need to engage in critical, feminist remembrance. Several tweets asked that we recall not just women’s role in 1916, but equally their legacies of gender equality work. Commemoration, after all, is a present-centred meaning-making process and the stories of the women of 1916 became the narrative that, for many, spoke ‘more directly to latter-day concerns and are more relevant to latter-day identity formations’ (Erll, Ann Rigney 2009). As seen in the hashtag collocations in fig. 5, #Repealthe8th, referring to the then ongoing abortion rights campaign, feature in this space. Abortion rights activists in turn invoked the feminist ghosts of the past in their annual ‘March for Choice’ in September 2016, which reimagined historical imagery and referenced female revolutionaries and the egalitarian language of the 1916 Proclamation under the banner ‘Rise and Repeal’ (Abortion Rights Campaign 2020).

## 89 Equality

90 The manifestation of a discourse of equality and women's liberation was perhaps the most explicit example in this thematic analysis of what Rantasila et al. describe as ‘the interplay between a moment of commemoration and the political potential opened up by collective, emotionally loaded, attention’ (Rantasila, Sirola, Kekkonen, Valaskivi, Kunelius 2018). Always commemoration is enacted through the lens of present-day concerns, and such moments of national self-reflection as the 1916 centenary often create opportunities for highlighting contemporary injustices on a national scale, whether by accident or design. ‘1916’ is, as Higgins says, a ‘touch-stone and lightning rod in the Irish popular imagination’ (Higgins 2013) and the centenary programme itself highlighted that the year-long commemorations ‘should be a reflection of how we are faring as a Republic worthy of the name’ (Government of Ireland 2015). In 2016, a critique of the progress of gender equality was undoubtedly one of the ways in which this worth was tested, extending out from the historical marginalisation of women in the revolutionary narrative. A discourse of women's liberation was prevalent in this tweet dataset, with equality referenced directly but also indirectly through discourses of representation, rights, and feminism.

91 While the position of women was already on the commemorative agenda for 2016, the conditions in which a national conversation about gender inequality and its relationship to the national story could take place were partly propelled by the fallout over the centenary programme ‘Waking the Nation’ that was published by the National Theatre, The Abbey, in October 2015.

## 92 #WakingtheFeminists

93 ‘Waking the Nation’ included only one female playwright and three female directors. By November, it had sparked a furore over gender imbalance in the sector that played out online under the hashtag #WakingTheFeminists and a smaller peak in tweet activity is discernible around 5 November 2015 (fig. 8). Exemplary of ‘hashtag feminism,’ which Clark-Parsons defines as ‘a form of feminist activism that appropriates Twitter’s metadata tags for organizing posts and public-by-default nature to draw visibility to a particular cause or experience,’ (Clark-Parsons 2019) it garnered international attention and support.

Commitments to gender equality reform from several theatres followed, as did national Arts Council research into gender inequality in the sector, a year-long series of 'Waking the Feminists' (WTF) meetings and events, and a revised centenary programme from The Abbey.

- 95 Reactions to the conversation about Waking the Nation that began on Twitter in the first instance expressed anger at the male-dominated programme. Keywords and hashtags like 'exclusion,' 'bias,' 'airbrushing,' 'sexist,' #Gender and #GenderEquality were used in expressing this marginalisation, an apparent unwillingness in the sector for change, and linking it with wider, structural gender-based inequity. The continuity of marginalisation and the struggle to be heard - indeed, a sense of *déjà vu* - was emphasised: WTF was seen as now part of the longer history of 'erasure' and of a masculinist heritage narrative. Equally, WTF and the organising around it was seen as progress, 'liberating,' revolutionary, and itself a persistent 'legacy' of the feminist women of 1916. The same demands for recognition of the contributions of women to Irish culture - of 'forgotten' women revolutionaries and their agency in 1916 - that characterised the remembrance discourse of the overall issue space were echoed in WTF tweets. The hashtag #WakingTheFeminists spread more widely to similarly motivated conversations, such as tweets concerning exhibitions, public lectures or talks about women and 1916, and individual women revolutionaries or 'heroines.' These statements tended to emphasise the feminism of these women more explicitly and those tweeting about WTF tended also to identify explicitly as feminists - individually and collectively - and with feminism, using the hashtags #feminist and #feminism.
- 96 WTF set the tone of the public conversation around commemorating the role of women in the Easter Rising and a critique of the state of gender equality in Ireland continued to be the subtext to both official and unofficial remembrance, evident in the government centenary programme. One such example was the official state ceremony to commemorate the role of women in the 1916 Rising on International Women's Day.
- 97 **International Women's Day**
- 98 International Women's Day (IWD) 8 March 2016 was marked out for the official state ceremony to commemorate the women of 1916 prior to the main centenary event on Easter Sunday, evident in the second largest peak of total tweets in this dataset ([figure 8](#)). IWD is itself an internationally recognised day to commemorate women globally, and in this issue space it was a mainstream feminist platform to make women (historical and contemporary) visible and express affective communion with women of the past and a discourse of liberation in the present.
- 100 [Figures 9](#) and [10](#) below show clusters of hashtags around the topic of IWD, and to a lesser extent 'Proclamation Day' (a day for school children to mark and reimagine the Easter Proclamation read out by the rebels in 1916) with hashtags like #womenofcourage, #inclusion, #hero, #equality4all, #genderequity, #inspiringwomen, #theproclamation, #1916women to name a few. [Figures 10](#) shows how keywords like 'honouring,' 'tribute,' 'legacy,' 'equality,' 'inspirational,' 'proud,' 'celebrating,' and 'heroes' appear in collocation with 'international women's day.'
- 103 The State ceremony was held at Kilmainham Hospital, Dublin, on IWD 2016. Passages from the keynote speech made by the President of Ireland, Michael D. Higgins, at the event were referenced in many tweets, passages that weighed in on remembering, forgetting, and the position of women in Irish society past and present e.g.:

- 104 | ...those who were long described as ‘the forgotten women of 1916’ are not forgotten any more... we reflect, together, on all that remains to be done if we are to live up to the dreams of equality and justice that animated those women from our past (*Higgins 2016*).
- 105 The tone of tweets surrounding IWD were celebratory, focusing on the legacy of the women insurgents, underscoring their role as ‘key,’ ‘significant’ and ‘pivotal,’ and expressing inspiration, pride and solidarity in celebrating and paying tribute, their ‘bravery and idealism’ re-emphasised. IWD events and cultural productions were described variously as fitting, beautiful, and perfect homages. Acknowledgement, recognition, and the imperative to commemorate and remember again characterised these tweets. Continuity between 1916 and 2016 was more explicit as with IWD there is a celebratory discourse directed towards women of the past as well as the women of today. Further to this was acknowledgement of the ways in which the women of the past and their roles in history have impacted the Irish nation today, the status of women in it, and individual sense of identity. Some tweets asserted the women of 1916 and Irish women in history as shapers of the nation and national identity. Equally, there was recognition of how much work is needed still to achieve equality in the present. Many tweets, for example, pointed to the slow progress of representation in Irish politics, gender quotas having been recently introduced in electoral nominations in 2016 in time for the February general election. To a much greater extent, this was to become the backdrop to the 2018 centenary of partial female suffrage (*Houses of the Oireachtas 2018*).
- 106 **The anti-feminist backlash?**
- 107 In a decade of commemorations that has been politically contentious at times, the ‘women of 1916’ have proved a relatively safe remembrance narrative. This is not to say wholly uncontested, with the extent of women's contribution questioned (4766306/B22BFGRX) and a continued resistance to engage feminist scholarship in the historical canon (*Connolly 2020*). One prominent feminist scholar commented that:
- 108 | Complaints that a ‘gender agenda’ favored by feminist historians, which serves not to correct but to exaggerate the role of women, were aired by some members of the public, often on social media (*McAuliffe 2021*).
- 109 What was not readily apparent in this tweet data was evidence of this kind of anti-feminist or even misogynistic discourse that is often expected in such research and social media forums, and for which Twitter is a ready petri dish. Banet-Weiser has considered this intractable duality of ‘popular feminism’ and what she calls ‘popular misogyny,’ a ‘defence against feminism and its putative gains,’ as they play out in multiple media settings including social media and comment-enabled platforms (*Banet-Weiser 2018*). Even as they are powerful technologies of recovery (*Gallon 2016*) and activist tools, platforms like Twitter have equally proved toxic and as sites of vulnerability for feminists, and particularly Black women, speaking out (*Banet-Weiser 2018, Chatelain 2018*). The answer in respect of this study has in part to do with the data source and the limitations of the API-based retrieval methods. At the time of collecting the tweet data in 2019, it was not yet possible to capture a cascade of full-text tweet replies or Tweet IDs through the Premium API service, which is where we would expect to find this type of discourse. It is another problem that has been faced by hate speech researchers, for example, when attempting to scale-up research methodologies and data collection from phenomena observed in-platform. Since this data was collected, new endpoint features have been added including a ‘conversation\_id’ parameter to better track these threads.

110 As outlined above, no query can capture every relevant tweet, nor return a fully representative dataset. Another partial explanation, therefore, is that those expressing opposition to this feminist remembrance politics simply did not engage in the hashtags or use keywords or phrases that matched with the query used to collect this dataset. In this sense, the 2016 dataset and analysis are based in a woman-centred narrative on Twitter primarily from the perspective of its participants, itself a feminist practice (Clark-Parsons 2019, Earhart 2018). Whether a deliberate eschewing of hashtags - which are after all designed to connect and make visible - or otherwise identifying language, can only be speculated upon here. Socio-political phenomena like the same-sex marriage debates in France (#mariagepourtous / #manifpourtous), or the abortion rights campaign in the Irish Republic (#Repealthe8th / Savethe8th), tend towards clearly discernable and emotionally-charged hashtag divides around which people collectively identify or oppose (Cervulle, Paillet 2014). It is perhaps in the connections being made between such contemporary equality struggles and the fabric of the national past that the potential for controversy may be more apparent. On the other hand, Julliard's analysis of #Théoridugenre (gender theory) debates on French Twitter demonstrated that the same hashtags were being used by opposing camps and as such confrontation was indeed taking place in tweet replies (Julliard 2016). The writing practices of such debates circumscribed by the techno-semiotics of the platform (Julliard 2016) will be case dependent. A future re-analysis could make use of the tweet replies endpoint to better ascertain such nuances around a purported 'gender agenda.'

## 111 Conclusion

112 To declare someone a hero or worthy of honour is an affective investment and one that, when carried out collectively, can help to raise certain individuals or groups to iconographic status. It should first be understood in the context of this study as part of the foregrounding and status-raising of the role of women in the Irish revolution - to honour is, after all, a value-laden act of recognition. This has been underpinned by a politics of visibility, for which digital media and social media are paramount and this type of valorising language is not dissociable from contemporary 'popular' feminisms and female empowerment culture around foregrounding women and women's agency, a practice that has become hyper visual in both digital and offline contexts in the past decade during which feminism has become 'mainstream' (Banet-Weiser 2018). Feminism in this period has increasingly been defined by the mobilisation of digitality in campaigning and critique, and this vignette of commemorative tweets make clear that for many Irish feminists historical commemoration was as much a lens for critically engaging the present as it was past.

113 Twitter is a test-bed for the study of 'uses of the past' in digital cultures and, as this article attests, the coalescing of feminism, history-making and the affective economy of nationally significant commemorations. In 2016, Twitter was just one avenue through which a renewed gender historical consciousness was being expressed and transmitted, and in which Irish feminists were challenging inequality and authorising heritage. Many of those engaged in such critical remembrance were also, directly or indirectly, performing a feminist identity. Insisting as they were on the key role of women insurgents - feminists, suffragists and socialists - in this pivotal moment in the Irish separatist movement, they were also making connections between feminism and nation through the prism of commemoration. While this body of tweets cannot be described as representative of the public, one snapshot of the 2016 commemorations online, it did not occur in isolation. The occasion of the centenary year may have created the conditions in which tensions around inclusion or

exclusion might boil over in different cultural spaces. However, this exercise in visibility, representation and critical commemoration via the medium of Twitter represents a wider process of actualizing the women of 1916 in 'official' or authorised history and communal remembrance over many decades. It is indicative of a wider public shift in the interpretation of the past, one that has persisted as the second phase of this commemorative decade draws to a close. As this article makes clear, social media spaces like Twitter are focal points for, and vistas upon, these dynamic engagements with the past as it is remembered in the present.

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