



Analysis of Temporal and Web Site References in History-related Tweets

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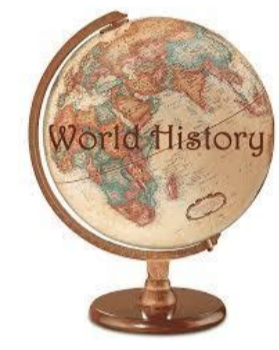
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Introduction

Social media has been commonly utilized to study public attitudes towards current events.

Microblogs are also used for sharing information related to the past, sometimes to the distant past.



Q1. What is the time horizon of history-related references?

Q2. What are key remembered events and entities?

Q3. How do people refer to history in microblogs?

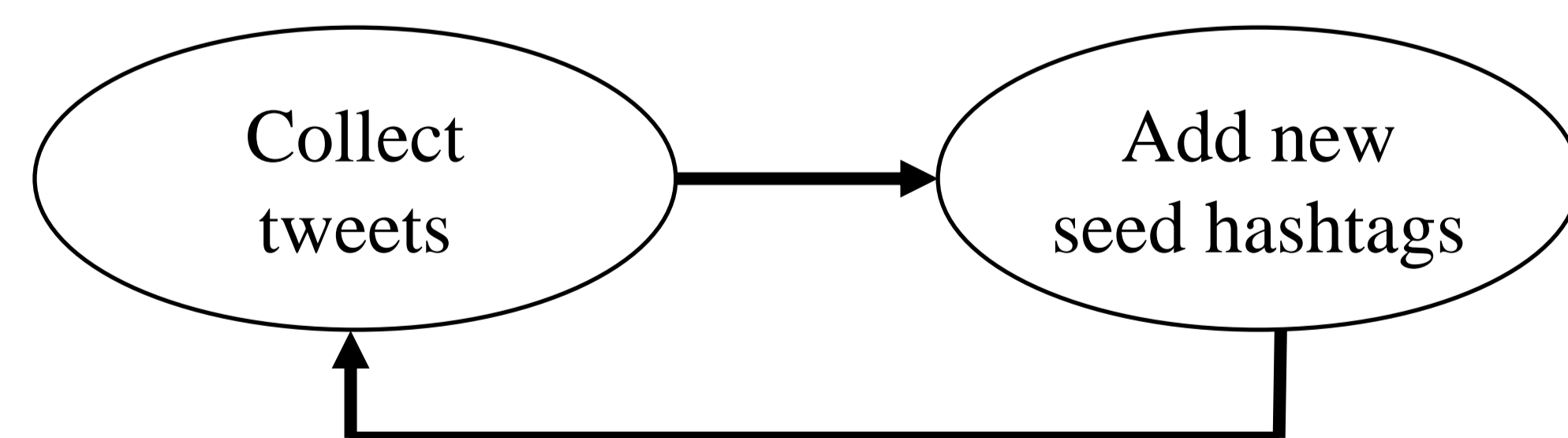
Data Collection

History related tweets collection.

- History-related hashtag based crawling using API. These hashtags were selected by experts. Example: #history, #WmnHist

- We call these hashtags *seed hashtag*

Seed hashtag collection: Bootstrap



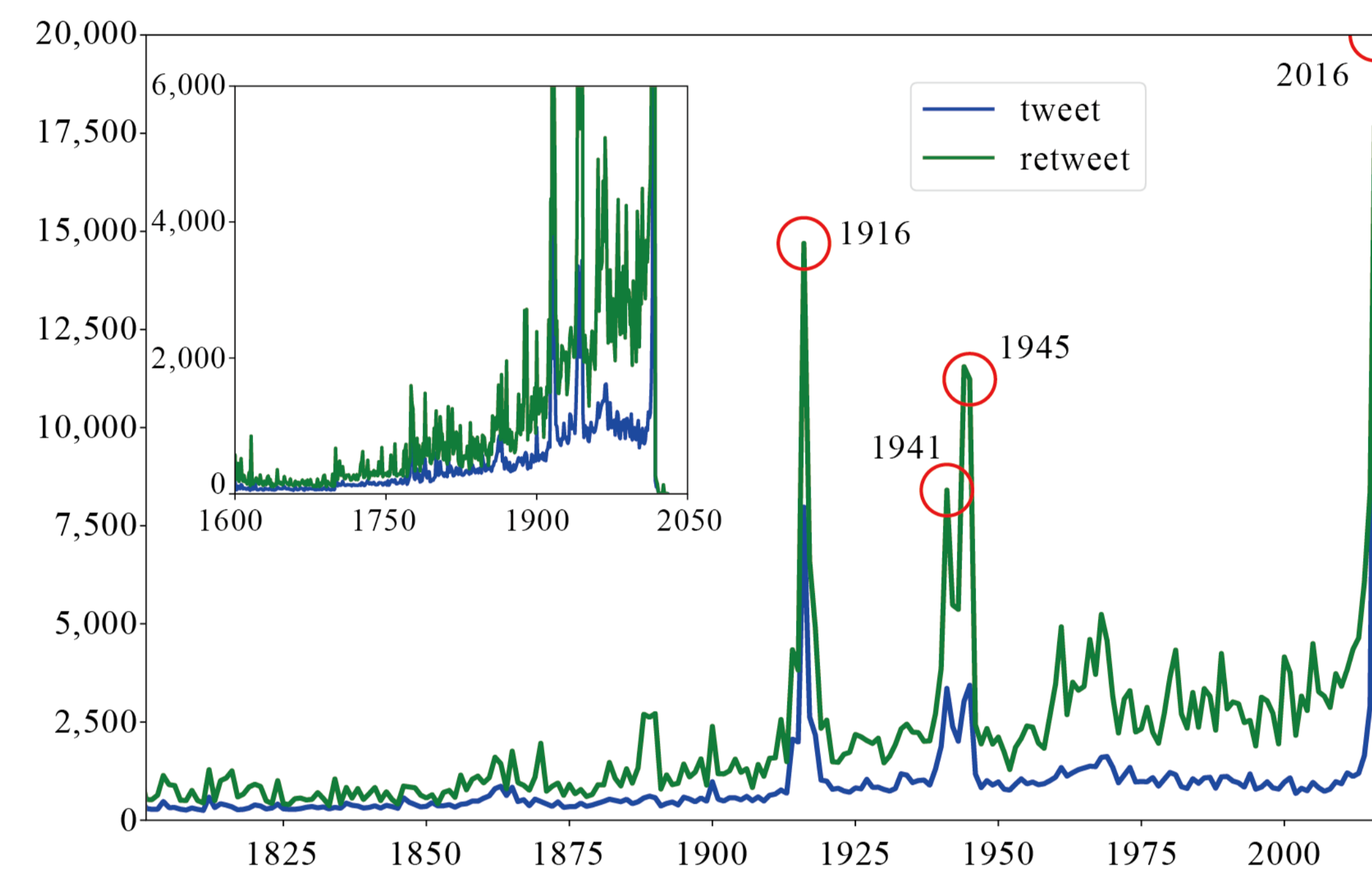
Statistics.

Duration: 8 Mar. 2016 – 24 Feb. 2017
 Number of tweets: 888,251
 Number of history-related hashtags: 147
 Number of tweets with time-references: 357,682
 Number of tweets with URL: 404,136

Temporal Reference Analysis

Time Reference Distribution

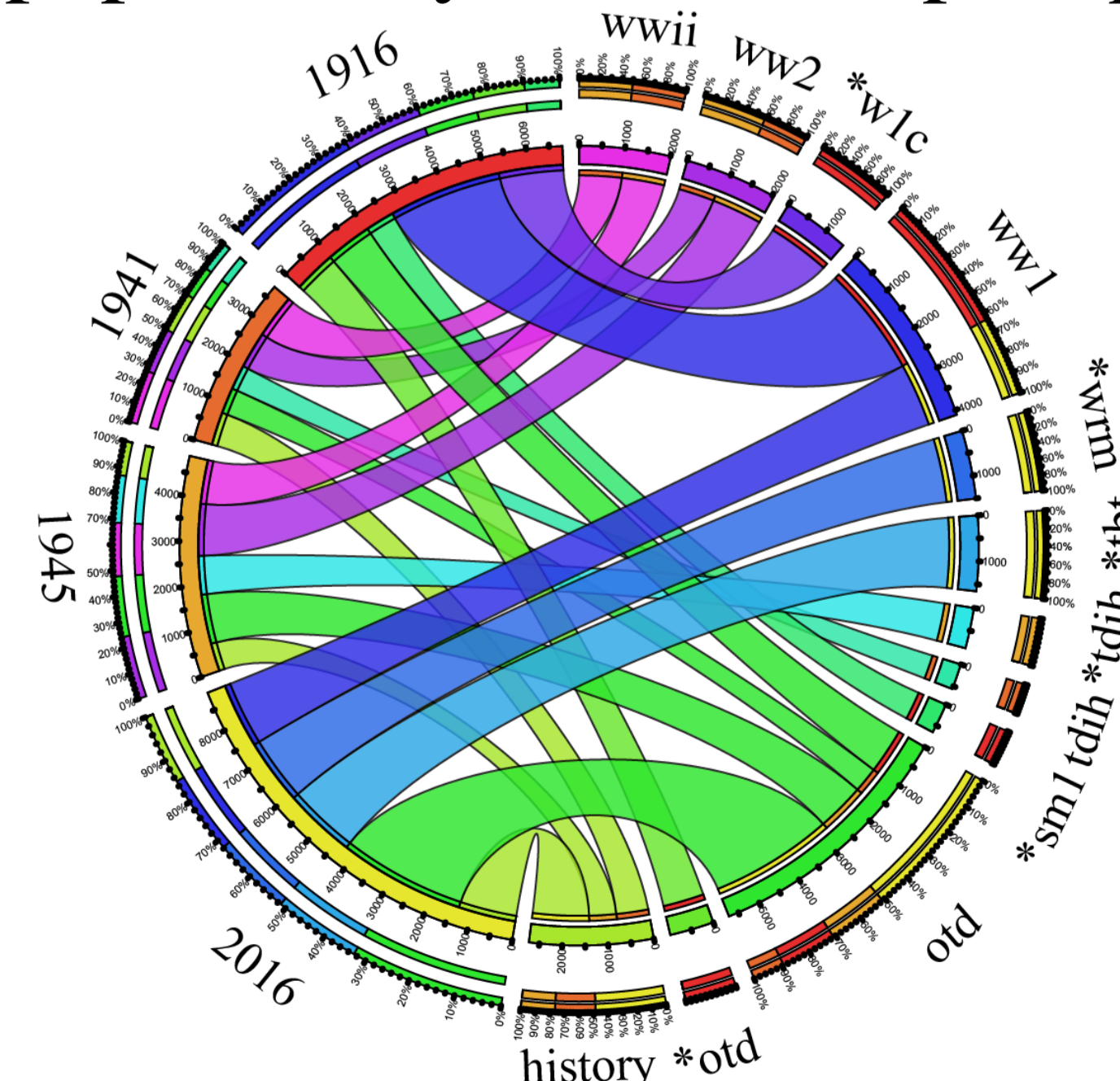
- Plot absolute temporal references.
- Tool: Heildetime
- Relative references are converted to the absolute ones.



- Increasing the number towards the present
- Four peaks (WWI, WWII, and 2016)
 - 1941: the Pearl Harbor attack and the participation of USA in WWII.
 - 1945: Normandy landing and the end of the war.
 - 2016: marked the 100th anniversary of the Battle of Verdun

Top-5 hashtags of the peaks

- #otd and #onthistday are commonly used.
- Calendar day: popular way to connect past-present



*w1c: #ww1centenary, *wrm: #weremember, *tbt: #throwbackthursday,
 *sm1: #somme100, *tdih: #thisdayinhistory, *otd: #onthistday

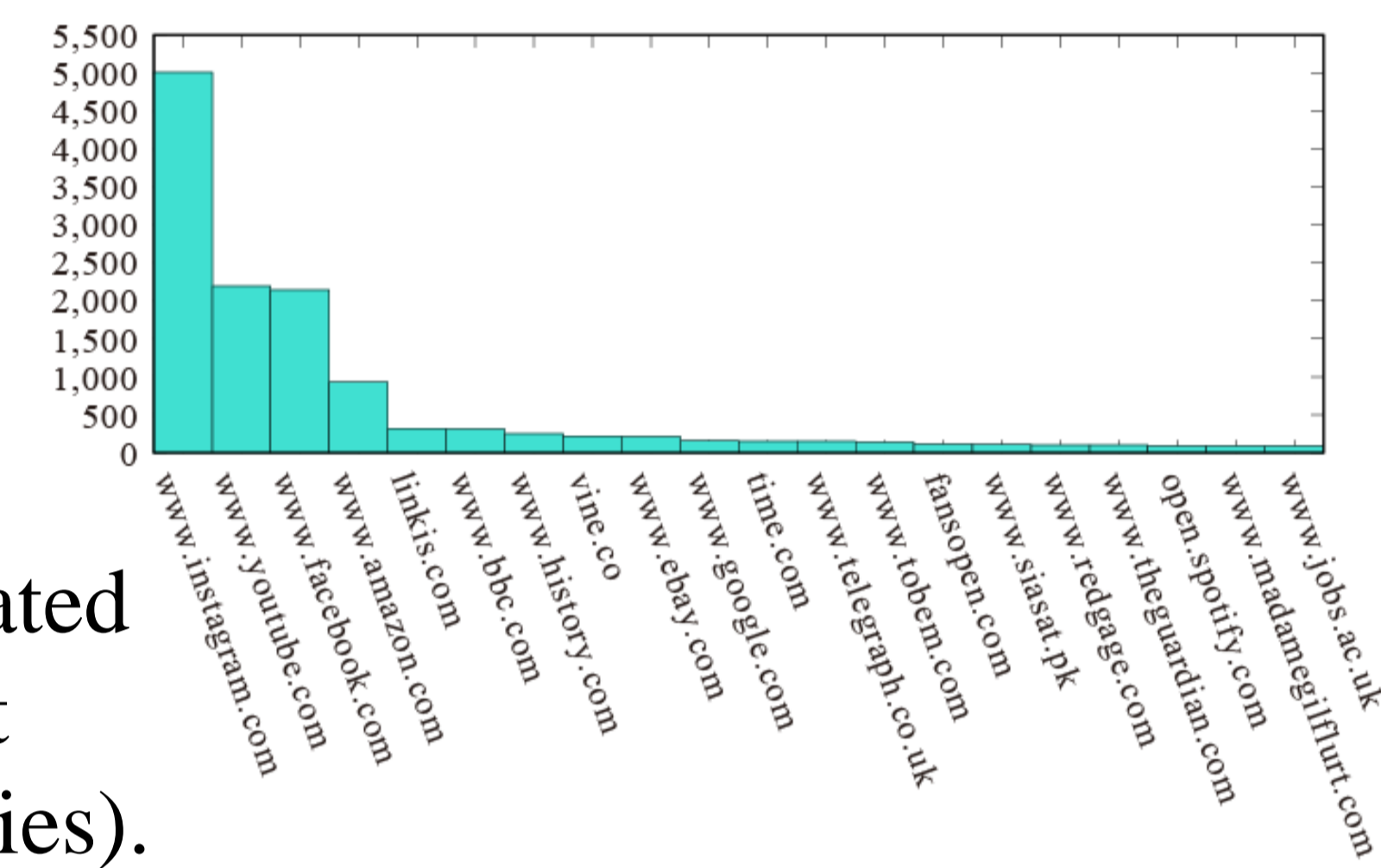
URL Analysis

URL Distribution

- Past is commonly remembered by diverse artifacts
 - e.g. such as images, videos, or historical documents.
- Many web services offer such kinds of data

Popular resources

- images (Instagram)
- videos (YouTube)
- shopping sites (Amazon) links refer to history related items (e.g. movies about historical events or entities).



Conclusions

In this paper we have performed initial analysis of collective memory in Twitter focusing on temporal expressions mentioned in tweets which are related to the past and on associated URLs.

Future works.

1. Novel tweets and hashtag collection method
2. Collect different languages
3. Qualitative analysis
4. Applications.

Comments