Mapping the Australian Twittersphere

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Why Twitter?

- Researching Twitter:
  - Significant world-wide social network
  - ~200 million users (but how many active?)
  - Varied range of uses: from phatic communication to emergency coordination
  - Healthy third-party ecosystem (for now)
  - Strong history of user innovation: @replies, #hashtags
  - Flat and open network structure: non-reciprocal following, public profiles by default
  - Good API for gathering data for research

http://mappingonlinepublics.net/
New Media and Public Communication: Mapping Australian User-Created Content in Online Social Networks

- Australian Research Council (ARC) Discovery Project (2010-13) - $410,000
  - QUT (Brisbane), Sociomantic Labs (Berlin)

- First comprehensive study of Australian social media use
- Computer-assisted cultural analysis: tracking, mapping, analysing blogs, Twitter, Flickr, YouTube as ‘networked publics’
- Builds on previous work of the research team (UCC, YouTube, blogosphere mapping)
- Advances beyond established approaches - beyond political blogospheres, beyond snapshots
- Addressing the problem of scale (‘Big Data’) and disciplinary change in media, cultural and communication studies - natively digital methods
- Studying society with the Internet (Richard Rogers)
#hashtag Publics

- #hashtags
  - ‘#’ + keyword makes tweets easily discoverable and marks themes
  - E.g. #ausvotes, #qldvotes, #qldfloods, #fail, #headdesk, #facepalmer

- Publics
  - Attend to matters of shared concern with some level of co-awareness
  - Varied in intensity and temporality
  - Emergent, constituted via discourse & affect

- #hashtag publics
  - Not all hashtags constitute publics; Twitter doesn’t ‘contain’ publics
  - What are the various patterns in the dynamics of different hashtag-based publics?
  - What might account for these differences?
#ausvotes: Leaders
# qldfloods Tweets

![Graph showing #qldfloods Tweets from 10 Jan 2011 to 15 Jan 2011](http://mappingonlinepublics.net/)
Towards Comparative Metrics
Beyond Hashtags

- Publics on Twitter:
  - Micro: @reply and retweet conversations
  - Meso: hashtag ‘communities’
  - Macro: follower/followee networks

- Multiple overlapping publics / networks

- What drives their formation and dissipation?
- How do they interact and interweave?
- How are they interleaved with the wider media ecology?
- Twitter doesn’t contain publics: publics transcend Twitter
Understanding Australian Twitter Use

- What is the Australian Twitter userbase?
  - Large-scale snowballing project
  - Starting from selected hashtag communities (e.g. #ausvotes, #qldfloods, #masterchef)
  - Identifying participating users, testing for ‘Australianness’:
    - Timezone setting, location information, profile information
  - Retrieving follower/followee information for each account (very slow)

- Progress update:
  - ~950,000 Australian users identified so far, ~21m connections
  - ~2 million Australian users in total?
The Australian Twittersphere?

Follower/followee network:
~150,000 Australian Twitter users
(of ~550,000 known accounts by mid-2011)
colour = outdegree, size = indegree
The Australian Twittersphere?

Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = outdegree, size = indegree
Thematic Clusters
Automatic Cluster Detection

Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = clusters, size = indegree
Automatic Cluster Detection

Follower/followee network:
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#Hashtag Participation

Follower/followee network:
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size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #auspol tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #ausvotes tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #wikileaks tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #qldfloods tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #eqnz tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #egypt tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #aflgf tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #nrlgf tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users (of ~950,000 known accounts by early 2012)
colour = #masterchef tweets, size = indeg.
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #eurovision tweets, size = indegree
Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = #royalwedding tweets, size = indeg.
theaustralian.com.au URLs

Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = tweets with URLs, size = indegree
abc.net.au URLs

Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
colour = tweets with URLs, size = indegree
ABC accounts

Follower/followee network:
~120,000 Australian Twitter users
(of ~950,000 known accounts by early 2012)
blue: official, red: personal ABC accounts
Understanding Twitter Publics

- **#hashtags:**
  - Useful coordinating mechanism for core discussion
  - Relatively easy to capture and analyse
  - Fails to capture non-hashtagged tweets about the topic
  - Good case studies, but very little comparative work to date

- **National / global Twittersphere maps**
  - Crucial contextual baseline for #hashtag case studies
  - Slow and laborious data gathering process, never complete
  - Very long-term perspective, beyond most funded projects
  - Indispensable for study of Twitter as a public space
‘Big Data’ and the Digital Humanities

Emerging needs in Twitter research:
- Unified, compatible methods and metrics for Twitter analysis
  ➔ Tools and approaches shared at http://mappingonlinepublics.net/
- Powerful infrastructure for long-term, high-volume tracking of Australian public communication on Twitter
  ➔ Data access requires substantial funding stream
- Facilities for long-term data storage and preservation
  ➔ Key roles for National Library, National Archives
- Integration with related datasets (e.g. MSM content)
  ➔ Need to address data interoperability questions

Twitter as a test case for digital humanities research
- Widespread, open, public platform for everyday communication
- Tool for observing society at scale through Internet research
