



INSIGHTS FROM
CHICAGO

Why open source data works: From tweets to planning

CMN 496: Introduction to
Communication Analytics

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Introduction

Why Public participation is important in planning?

A Typical public participation meeting



- Facilitation
- Communication
- Public Relations
- Conflict resolution
- Mediation
- Organisational development
- Co-designing
- Consultation
- **Decision Making**

Introduction

History of Participation in Planning

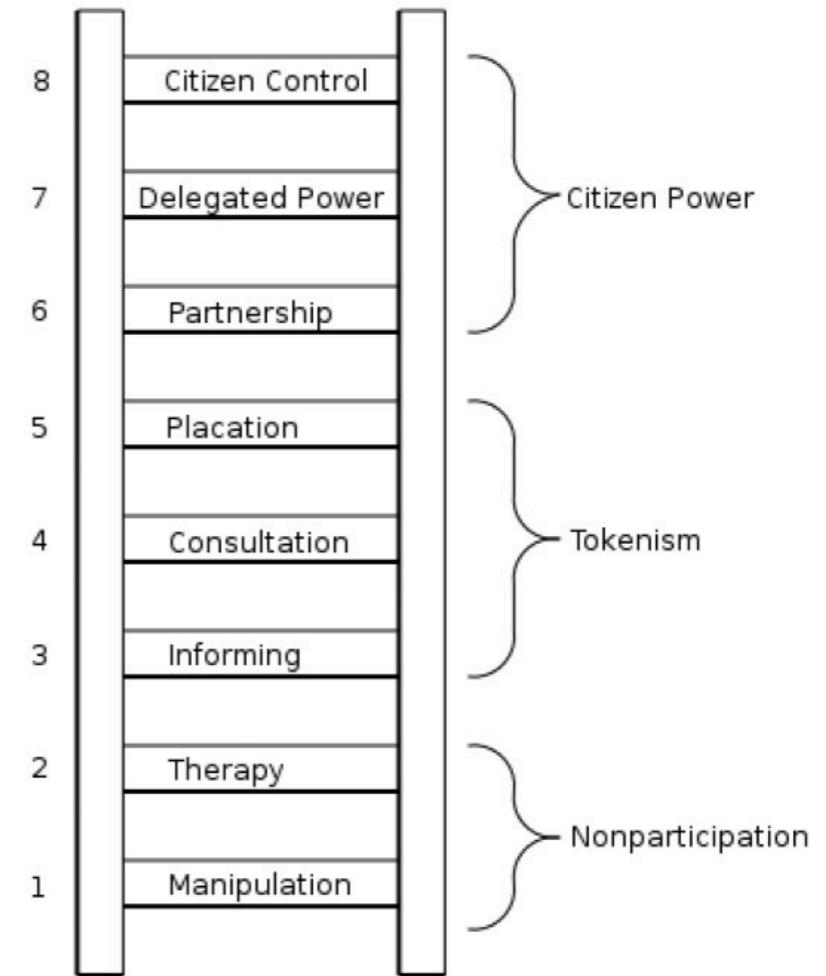
- **Methods:**

- Data collection
- Interviews
- Surveys
- File reviews and structured observation
- Case studies
- Small Group Methods (focus group, Delphi, Charette, etc.)
- Secondary Data (eg. Agency Data)
- Content Analyses
- Ethnographic Methods (Field Studies, Participant Observation, etc.)

- **Traditional techniques:**

- Publications
- Public Meetings
- Open House
- Advisory Committee/Task Force
- Workshops
- Target Briefings
- Focus Groups
- Bilateral Meetings
- Toll-free phone lines
- Surveys
- Public hearings

Arnstein's ladder of participation



Introduction

Future of Participation

- Emerging techniques:

- Open space technology
- Future research conferences
- **E-participation**
 - Website
 - Bulletin boards
 - Chat and news groups
 - Dialogue groups
 - Virtual communities
- Public Policy dialogue
- Appreciative enquiry
- Study Circles

- E-Participation example

The grid contains the following information:

- Call Us**: 601-981-1511. To speak with MPO staff members during normal business hours. Mon.-Fri. 8:00 AM – 4:30 PM.
- Write Us**: Jackson Metropolitan Planning Organization, 1020 Centre Pointe Blvd, Pearl, MS 39208.
- Follow Us**: Facebook @ facebook.com/CMPDD. (This box is highlighted with a red border.)
- Email Us**: mpo@cmpdd.org.
- Participate in Person**: Watch for meeting notices on the MPO's website, social media account, or in a local newspaper detailing upcoming workshops or public meetings hosted by the Jackson MPO. Visit the MPO's website at www.cmpdd.org/public-notices to learn more.
- Visit the MPO Website**: www.cmpdd.org.
- Complete a Comment Card**: Comment cards are provided at all workshops and public meetings hosted by the MPO. An electric comment card is continuously available on the MPO's website at www.cmpdd.org/public-notices/.

- How can social media help?

- Saves time for both citizen and authorities
- No middle-men
- No loss of information
- Quick response and resolution
- Efficient for feedback



Research Question

**Testing if social media is efficient:
if yes, proposing it as a potential participation mechanism**

Is social media used in planning as a communication tool?

We are still stuck with Facebook

Can we check twitter?

**Analysis and
evaluation**

Data Description

Checking for the city of Chicago

Twitter data description of the pages studied

#	Name of Page	Twitter Handle	# of tweets in two weeks
1	City of Chicago	@chicago	322
2	Chicago Deputy Mayor	@chicagosamir	130
3	Chicago Transit Agency	@cta	712
4	Chicago Police	@chicago_police	399
	Total	NA	1563

- Variety of responses
- Random topics
- Ease of analysis
- Possibility of Geolocation
- Ease of assimilating issues
- Ease of analysis sentiments
- Reproducibility of the same code-chunk for different MPOs to undertake analysis
- Ease of advertising and hence better communication, better participation and better decision making.

Analysis - I

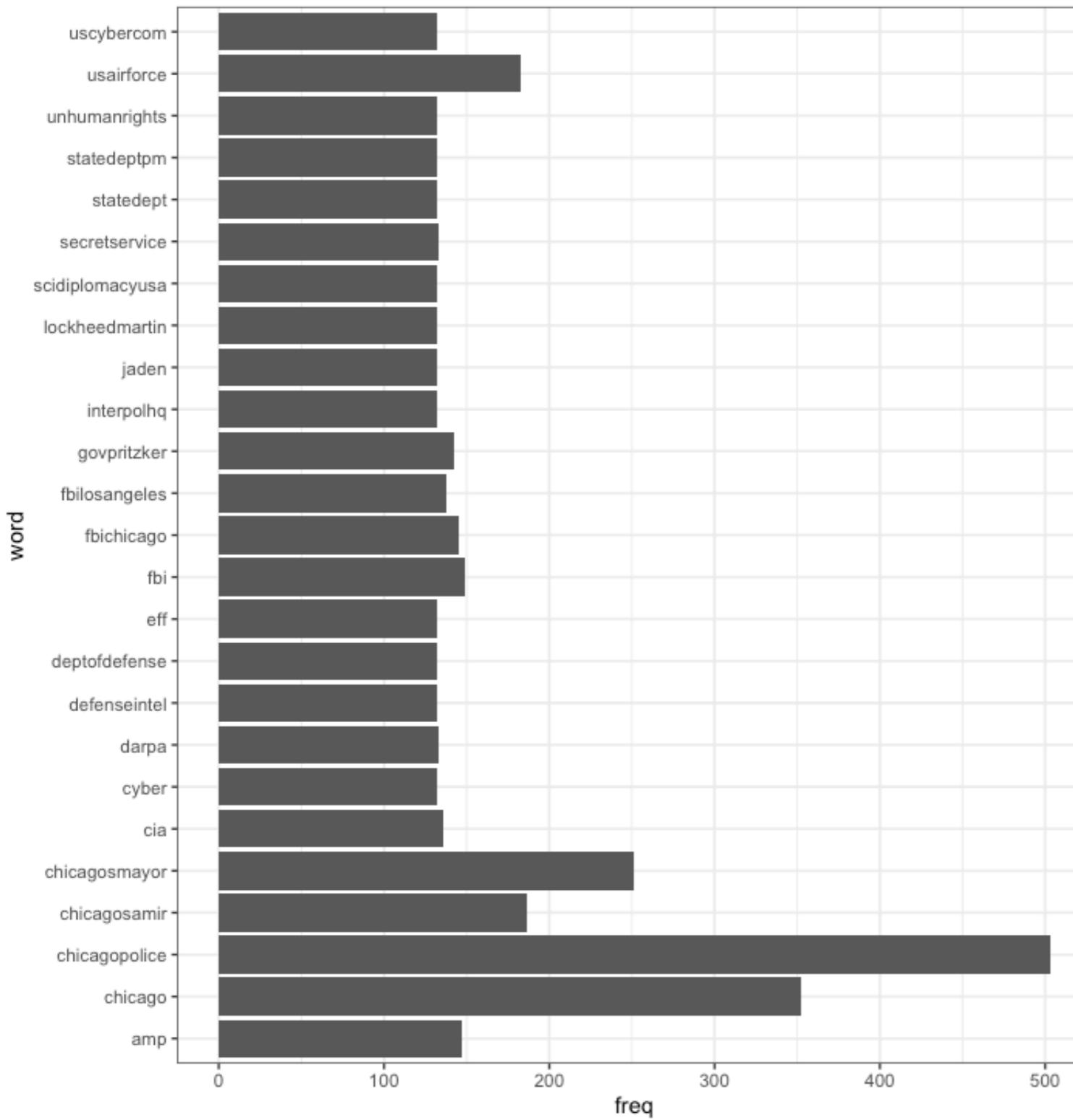
Wordcloud

Wordcloud from the most tweeted words



- Gives broad areas that need focus in the city:
 - Train/Trains
 - Bus
 - People
 - Informs/Gives feedback to alter budgets to go into given sectors, project formulation
 - Highlights topics for social change:
 - Cops
 - CTA-fails
 - CIA/FBI
 - Though not academically acceptable, it is a good practice for getting a quick understanding of ever changing issues in modern urban contexts/cities.

Most frequent words found in the tweets of Chicago Agencies



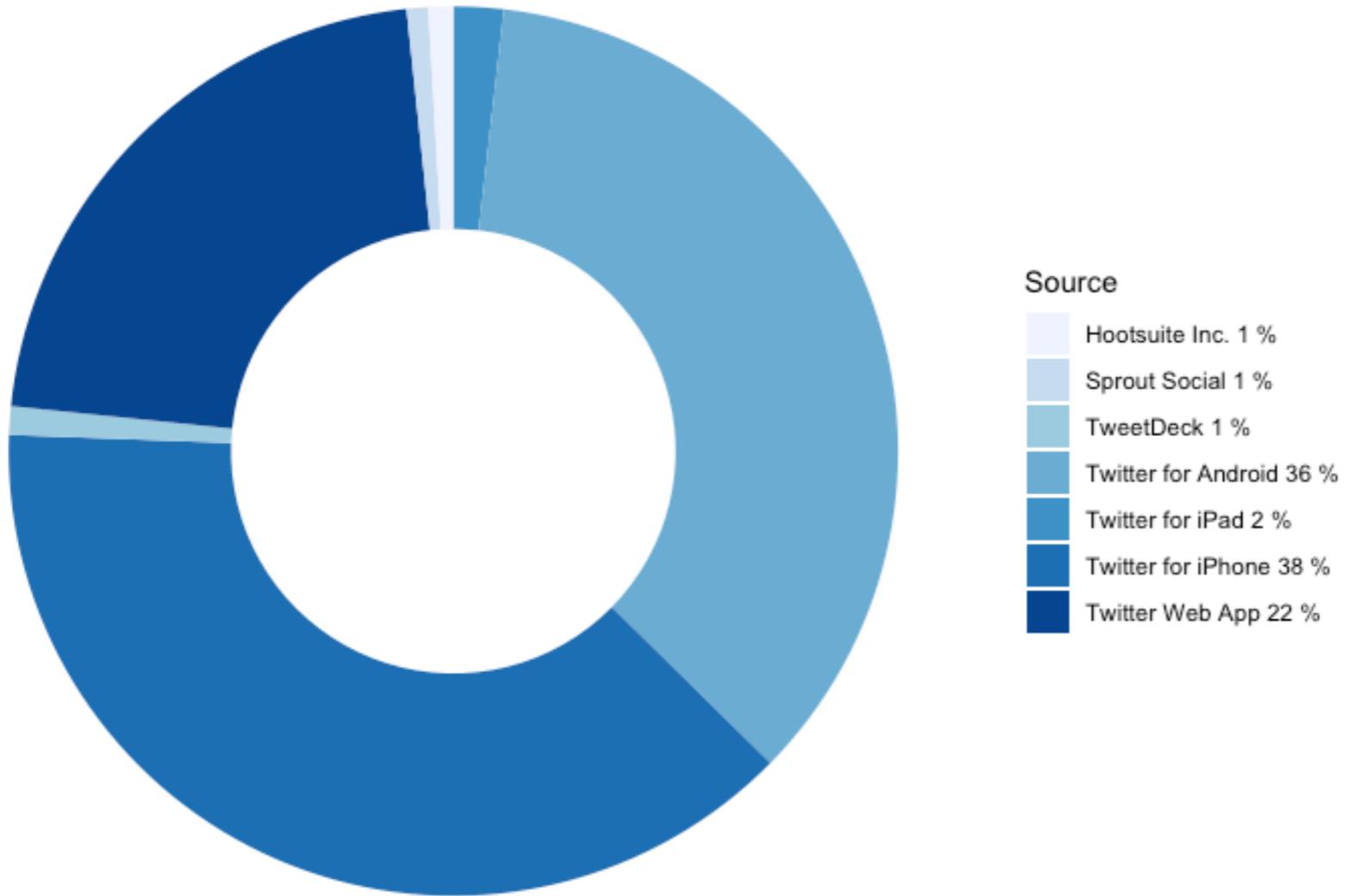
Analysis - II

Word frequency

- Variant results, slight deviation from the word-cloud
- Gives clear idea that people in Chicago are more interested in what the police does rather than city issues - does that mean the police should reduce policing?
- Skewed data due to elections? #govpritzker
- Some tags do not make sense, will need detailed checking: Why are Chicagoans interested in unhumanrights and scidiplomacyusa, interpolhq and fbi: Ukraine?
- Do urban planners have concern for these issues? Maybe yes, maybe not - answer, subjective. It depends on if it affects urban settings or the city directly.

Analysis - III

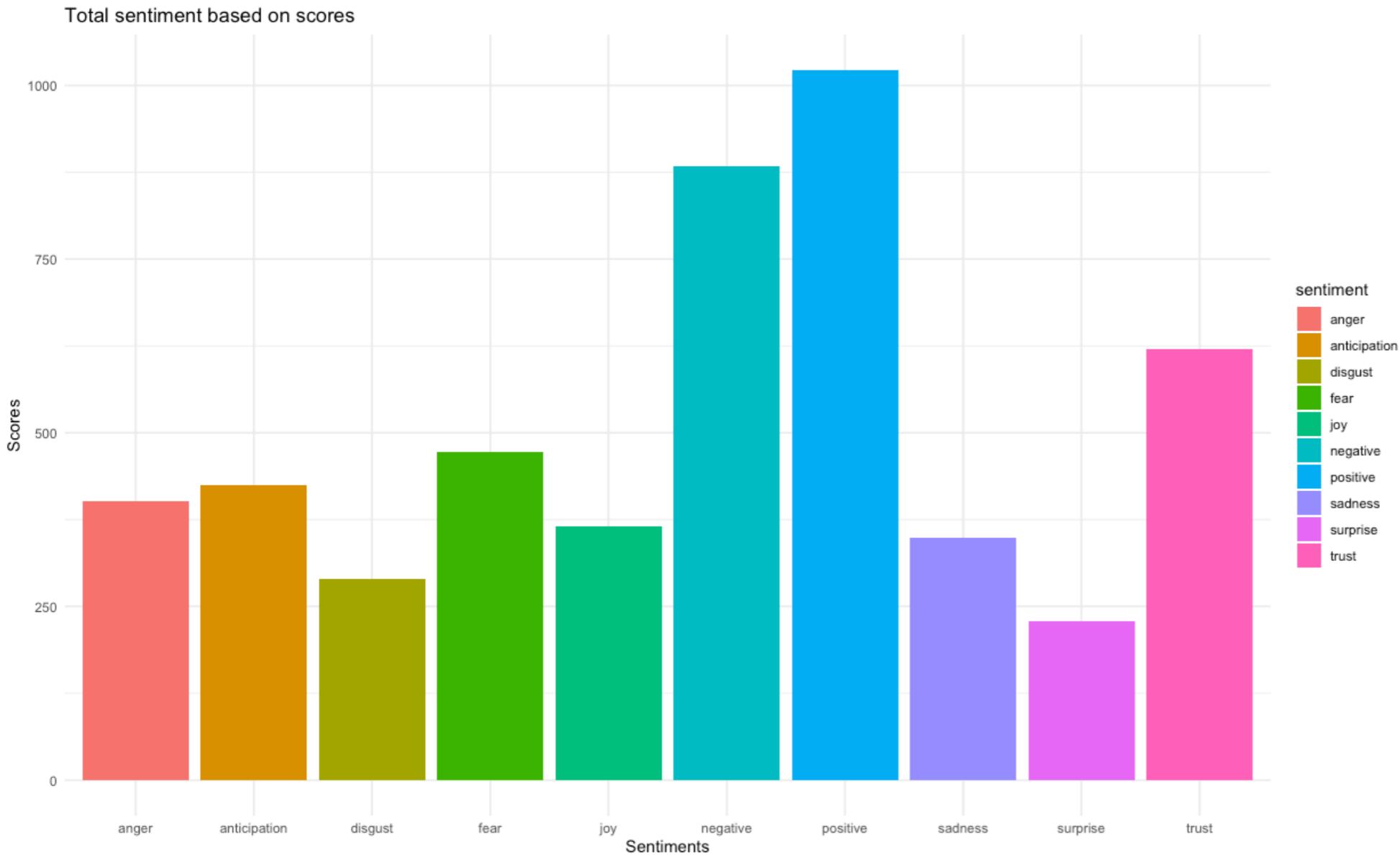
Source



- Barely useful from an urban planning standpoint, but still gives some information
- Incomes v/s level of participation - do iPhone users have better affordability and hence participate more/are more invested in urban affairs?
- If 22% users use twitter through their web-app, are they stuck at work to attend a participation meeting physically?
- Can we still involve these individuals' voices in city planning, instead of the flow going from the public → twitter → politicians → planners → action?

Analysis - IV

Sentiment



- We see a balance of sentiments.
- What is surprising is the sentiment of trust exhibited by people in all the four sources of tweets analysed.
- However, there is a considerably high share of fear, anticipation and anger amongst people. This could be due to their issues not being addressed.

Analysis - V

Geolocation

- Chicago combined all pages = 1563 tweets
- Chicago Geolocated = 106 tweets
- Mumbai Municipal Corporation (@mybmc) = 4000 tweets
- Mumbai Geolocated = 564 tweets
- Geotagging share:
 - Chicago = 6.78%
 - Mumbai = 14.1%
- Relevance of selected tweets?

Inferences

Does twitter data have the power to inform planning decisions?

- Simple answer is, yes.
- Some ways how:
 - Assisting in planning decisions
 - Aiding excluded people to participate in city-planning virtually, especially since almost everyone has a smartphone and a twitter account in today's date.
 - Will help city planning stay up-to-date with real-time issues faced by people in the city and foster a closer bond between the citizens and urban planners.
 - (Will save planners from getting shouted at/thrown shoes at like in public meetings, since angry comments on social media would be better and more civil than in person?)

Learnings and challenges

Why is it more relevant in the developing world

- Especially useful in the developing world since there is always lack of data on public sector issues.
- Ease of response mechanisms will help cities aid systematic issues as well.
- Some challenges could be:
 - Citizens not geotagging tweets when raising issues
 - Lack of reach due to lack of advertisement and reach of city corporations/MPOs
 - Maybe used as development pitches/propaganda by politicians, need to weed tweets and not let credit be stolen
 - Issue with multi-lingual responses over twitter





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References

https://www.gbailey.uk/twitter_workshop/pt3Regional.html

<https://towardsdatascience.com/a-guide-to-mining-and-analysing-tweets-with-r-2f56818fdd16>

Arnstein, S. (1969.) A ladder of citizen participation. Journal of the American Planning Association, 35(4), 216–224.

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