Analysis of Social and Information Networks
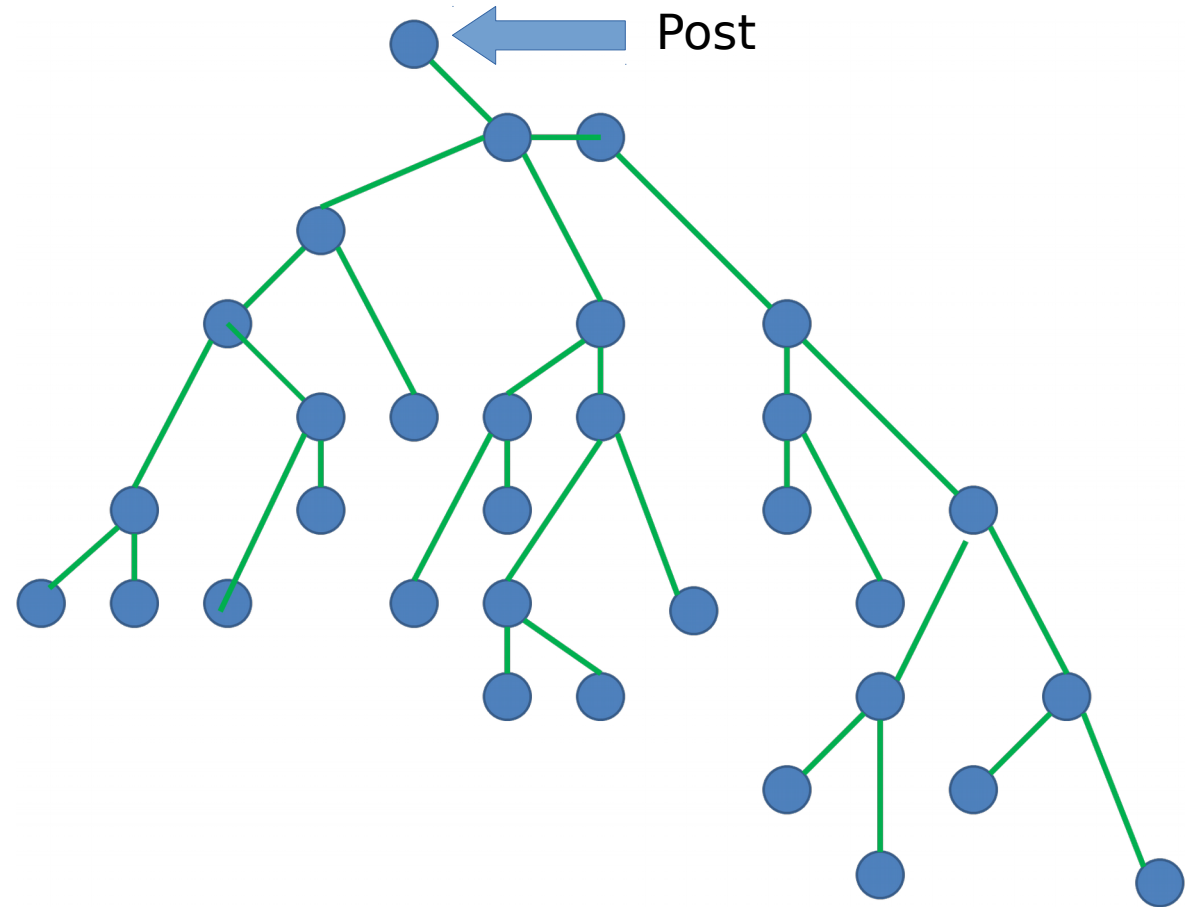
Chapter 5 – Positive and Negative Relations

Relations in Reddit

- **Users can mainly interact in two ways:**
  - Comment on a link
  - Respond to a user comment on a link
- **Reddit's scoring system provides insight to a comment/link content:**
  - Upvoted comments/posts tend to present common and accepted opinions by the community
  - Downvoted comments/posts pose unpopular opinions or irrelevant content for the discussion (e.g. spam)
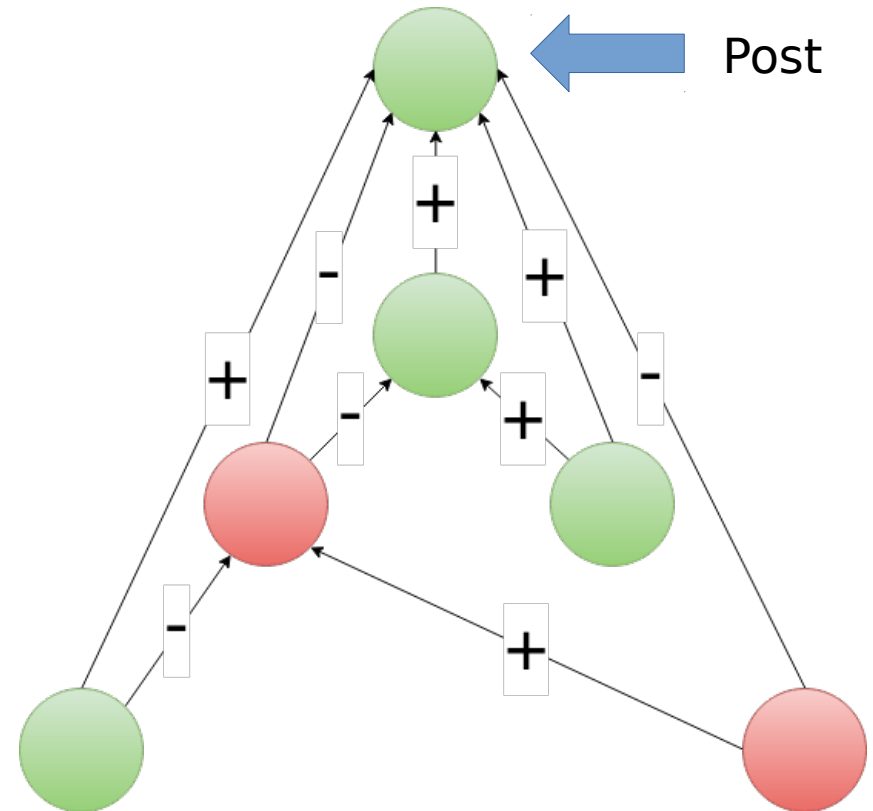
Graphs of Comments

- **Consider that a comment is a response to a post or another comment**

  - Creates graph trees of responses

  - One comment can only respond to another comment, but one comment can originate several responses

  - No Triangles

Post

- **Consider each comment is a response to the post AND another comment**

  - Generates 1 triangle per response

  - Green: upvoted

  - Red: downvoted

  - Agreeing opinions: +

  - Disagreeing opinions: -

  - Balanced

Post

Graphs of Comments: Assumptions and Challenges

- **Assumptions:**
  - The score of a comment/link is a measure of how agreeable is its content.
  - If a response has the same score as its parent, they are of the same opinion
  - If a response has a symmetric score as its parent, they are in disagreement
- **Interesting to prove these assumptions:**
  - Text mining to determine sentiment and level of agreement of a comment/post
  - Determine if a post/subreddit has balanced comments
  - Determine opposing communities on a subreddit (e.g. r/politics before a major election)

Post