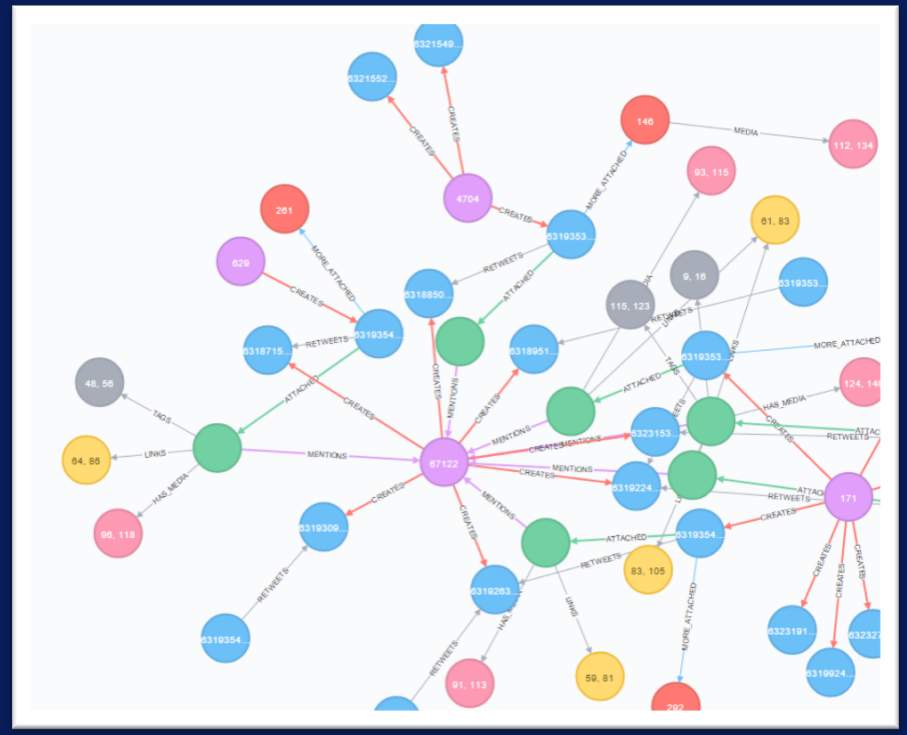
Why Graphs?

Example 1: Social Media

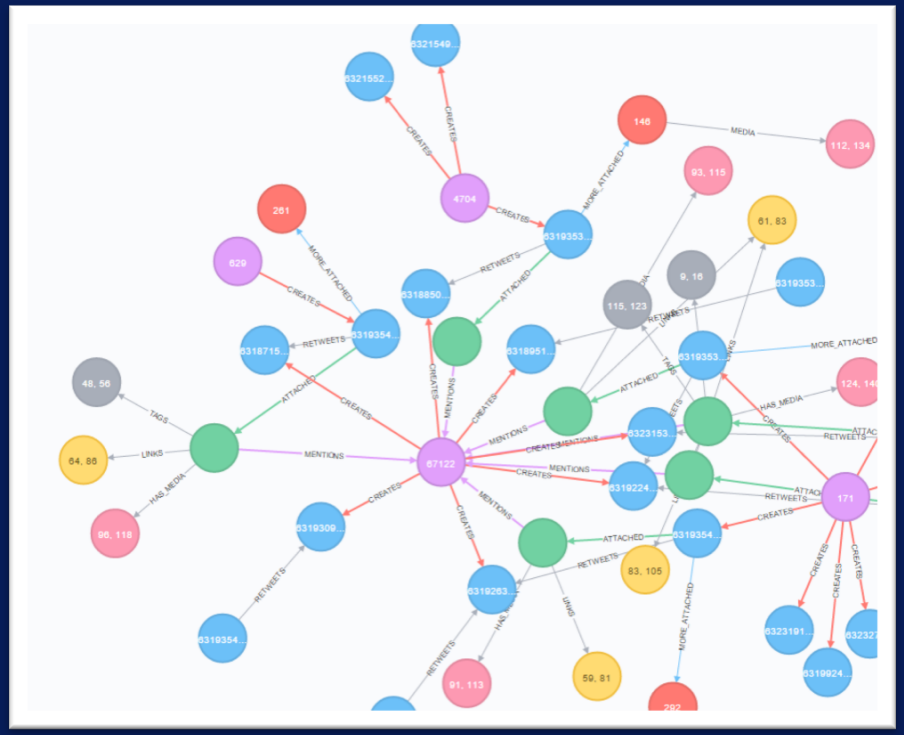
Tweets are Graphs

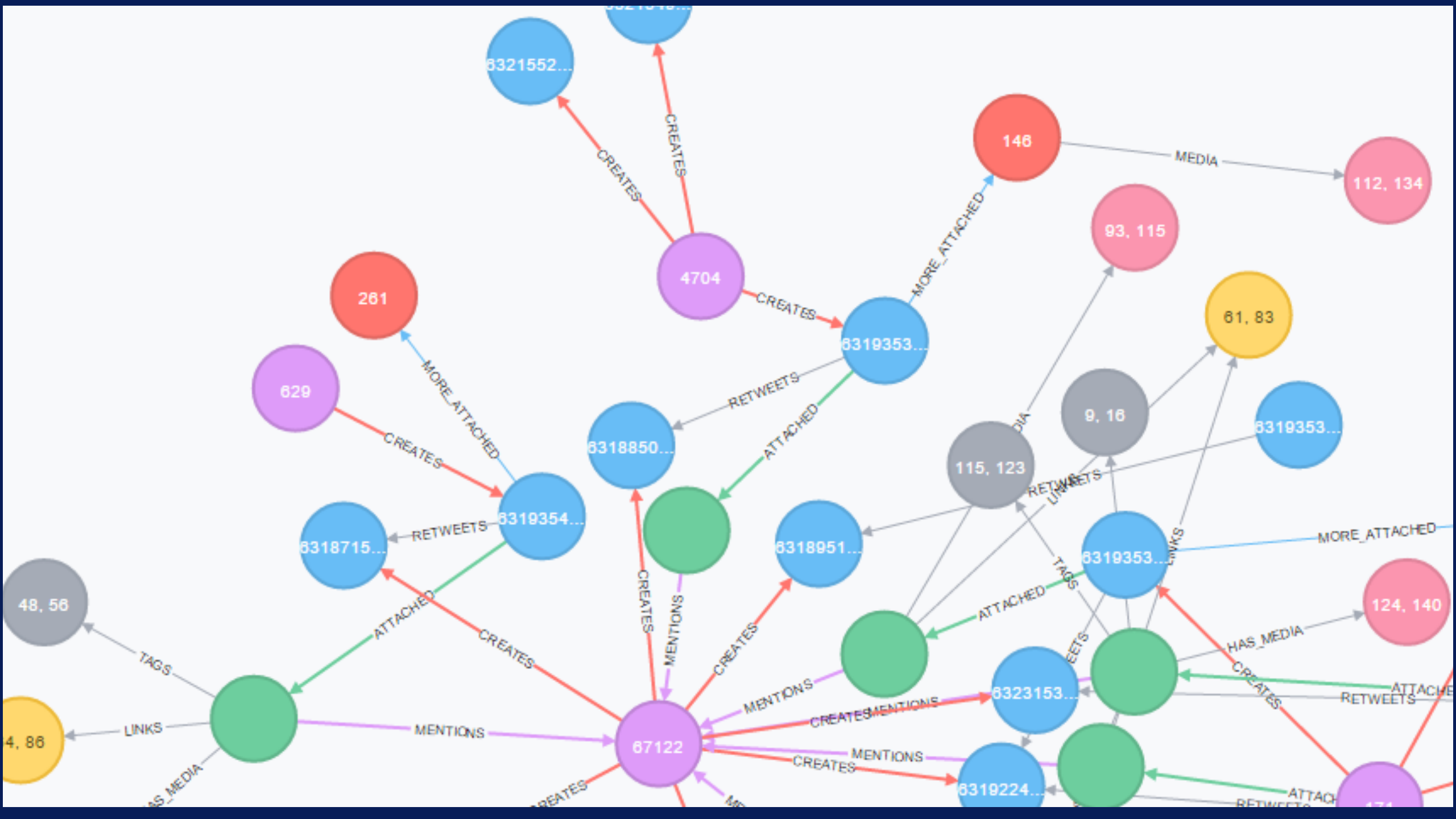
- **Many kinds of nodes**
  - Users
  - Tweets
  - URLs
  - Hashtags
  - Media



Tweets capture Human Interactions

- **Many kinds of edges**
  - User creates Tweets
  - A tweet is in response to another
  - A tweet retweets another
  - User mentions User
  - Tweet contains Hashtag
  - User follows User

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MENTIONS
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CREATES
MENTIONS
RETWEETS
MENTIONS
CREATES
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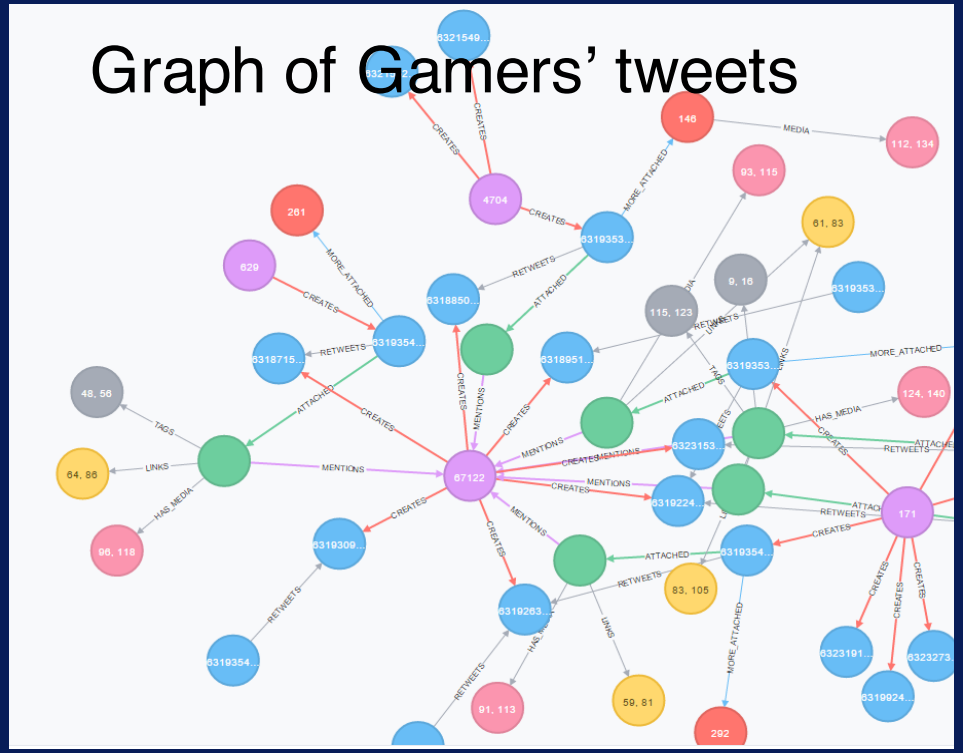
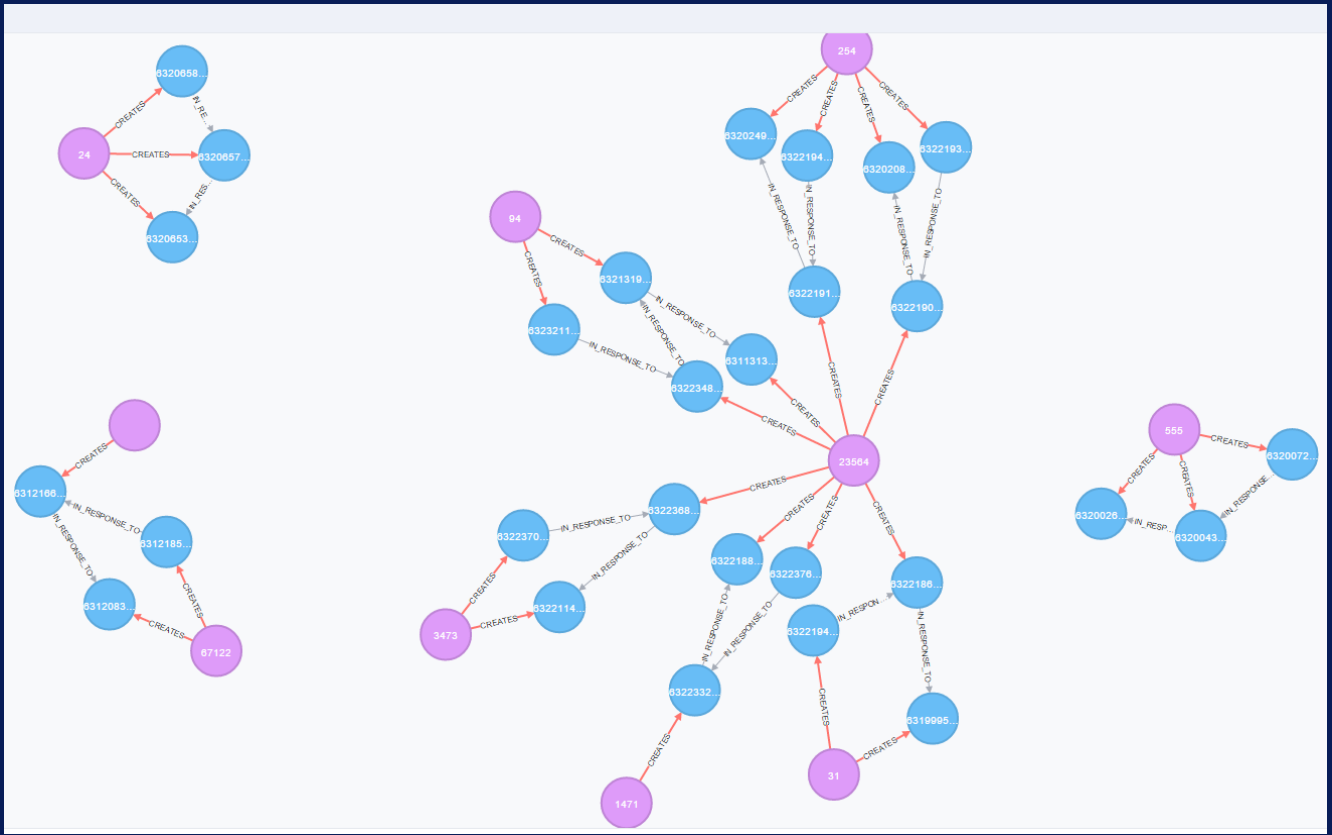
Example 1: Social Media Analytics

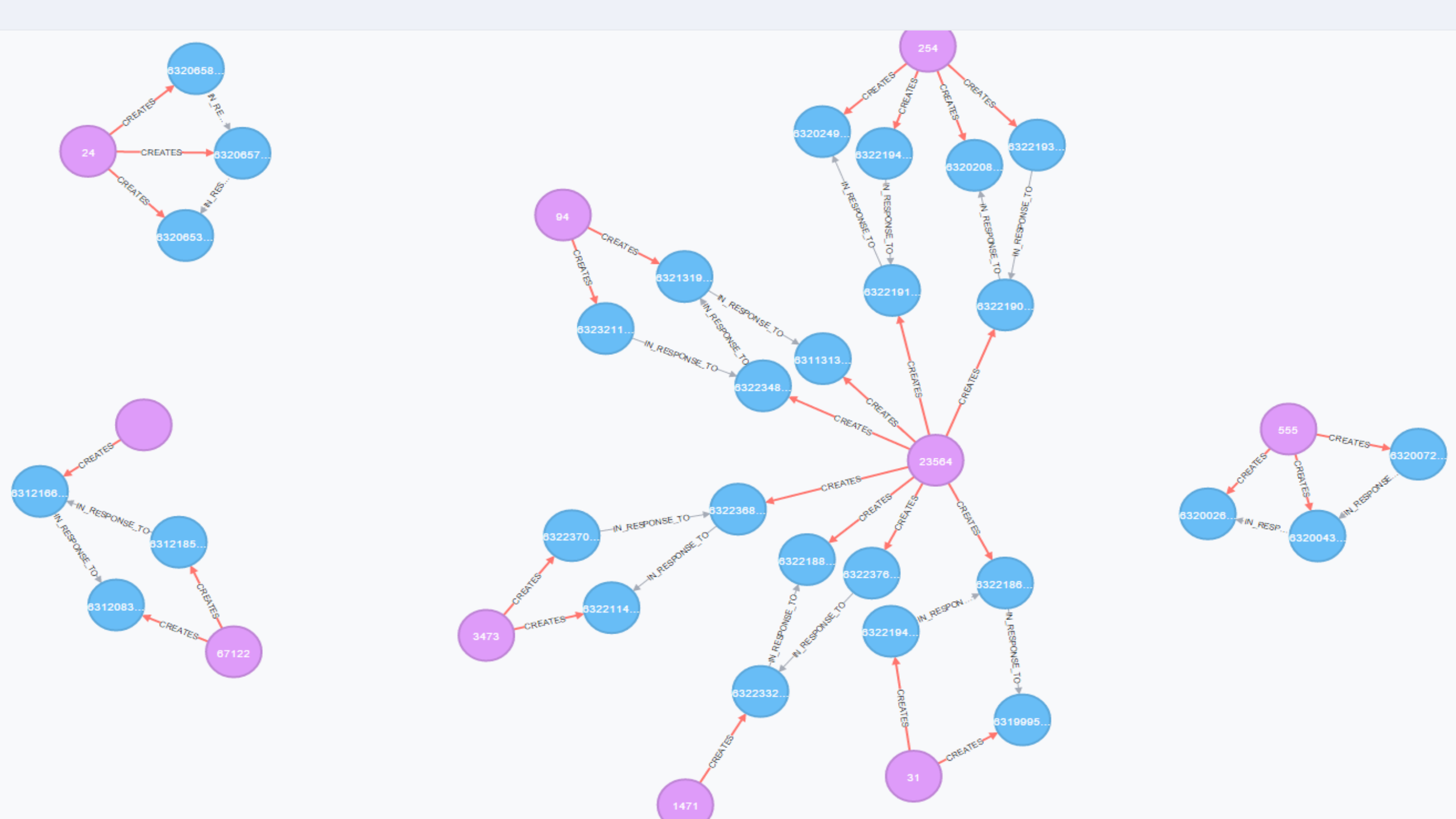
- **Behavioral Psychology**
  - A branch of psychology that studies people's behavior
- **Data Science questions of a behavioral psychologist**
  - Do players of violent online games show more confrontational behavior in their tweet conversations?
  - Can we tell how "addicted" a user is to a game?



Why Graphs?

- **Extracting Conversation Threads**

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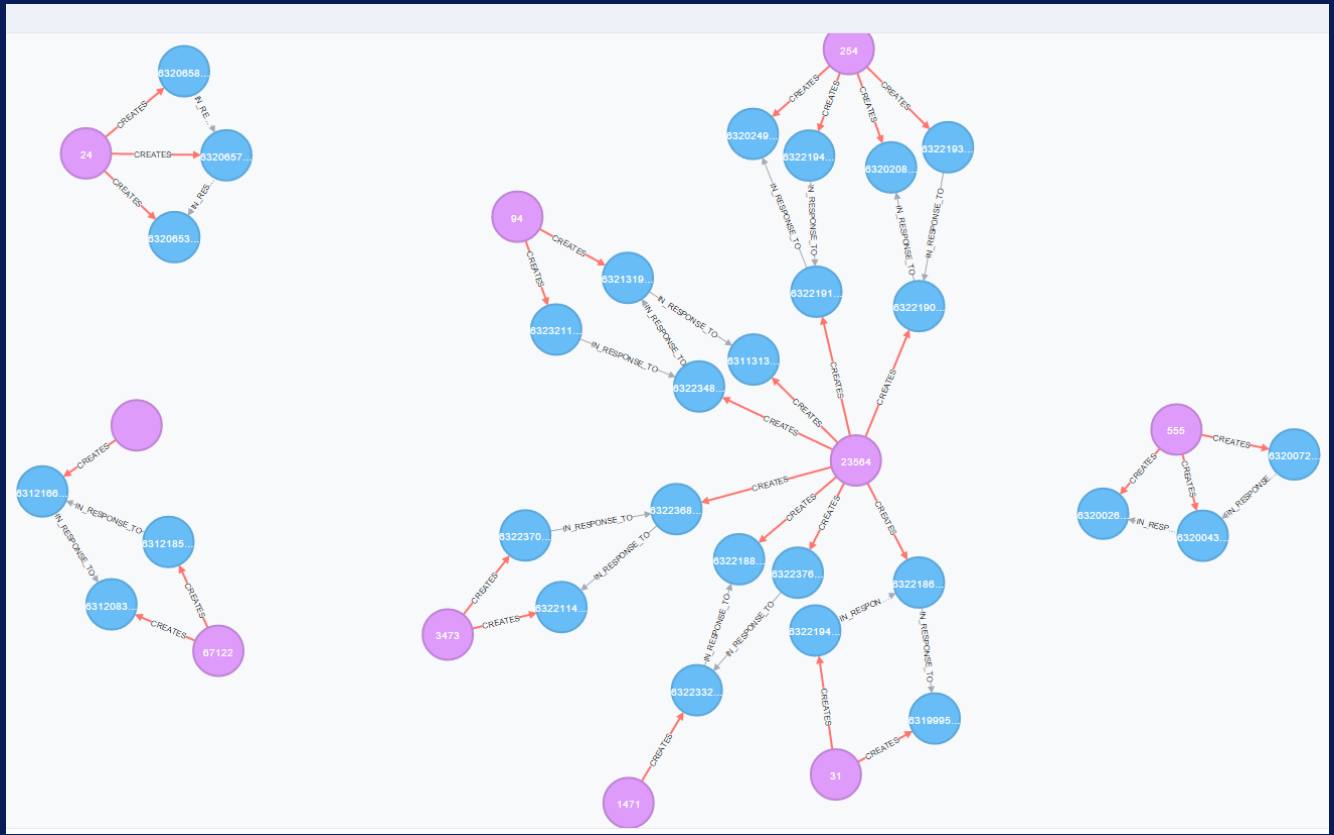
Why Graphs?

- Extracting Conversation Threads
- Finding Interacting Groups
- Finding Influencers in a Community



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