

# Digital Humanities Across Borders

Class 15: Networks (part 1)

# A quick primer on networks

courtesy of Scott Weingart

# Stuff

# Stuff

- Stuff comes in different types

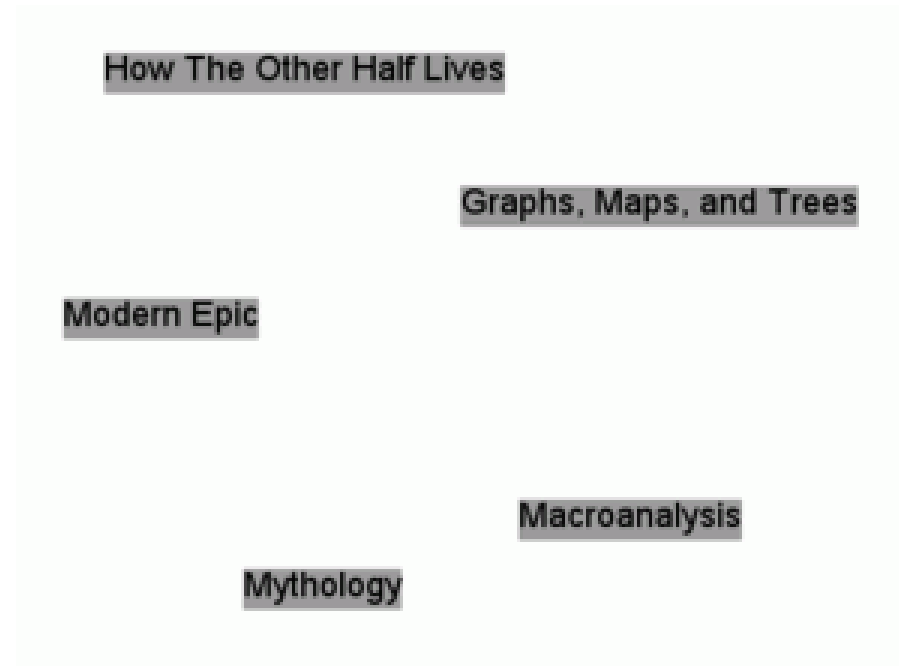
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- Different disciplines have different terms for this stuff
  - *nodes*
  - *vertices* (math/comp sci)
  - *actors* (sociology)
  - *agents* (modelers)
  - *points*

# Nodes of a single type



# Nodes of multiple types

Jacob A. Riis

Graphs, Maps, and Trees

How The Other Half Lives

Modern Epic

Macroanalysis

Edith Hamilton

Mythology

Franco Moretti



# Nodes can have attributes

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- Birth dates
- # of pages
- Year of publication

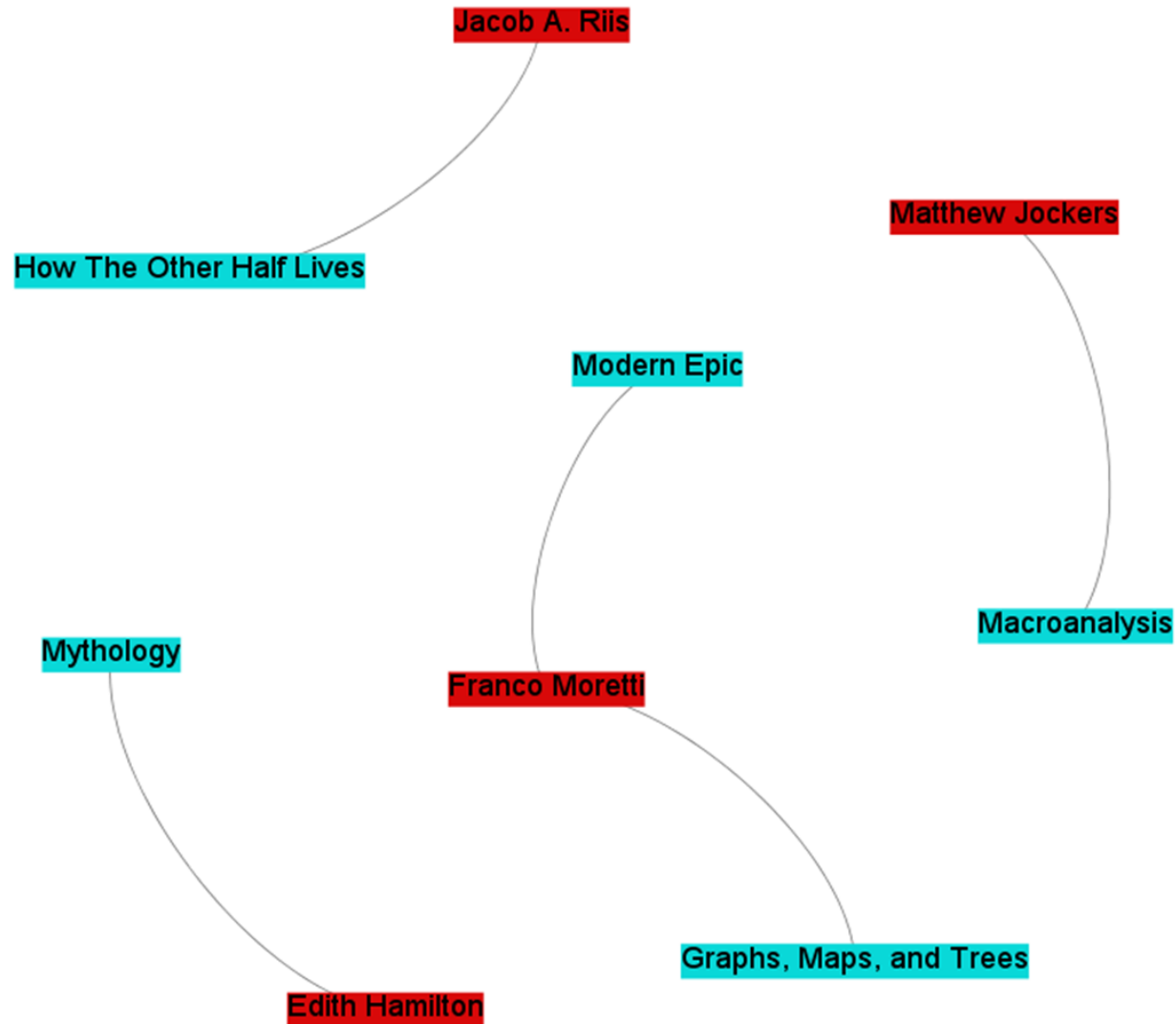
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  - (Co-)authors
  - Place of publication
  - Genre

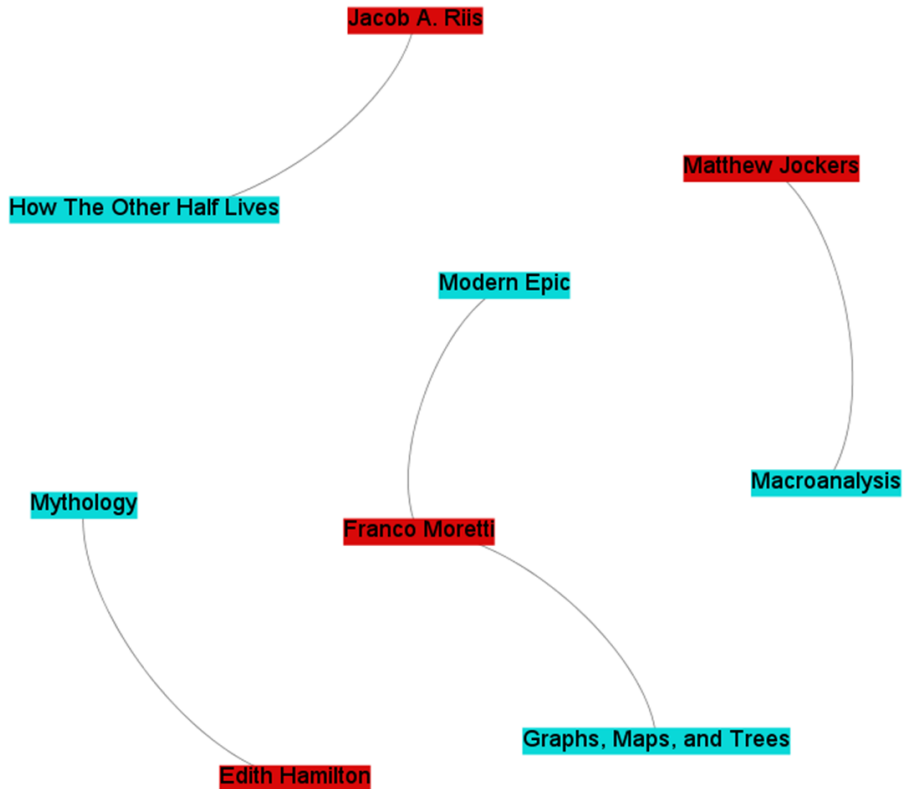
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  - Genre
- Lots of terms for connections
  - *edges*
  - arcs
  - links
  - ties
  - relationships

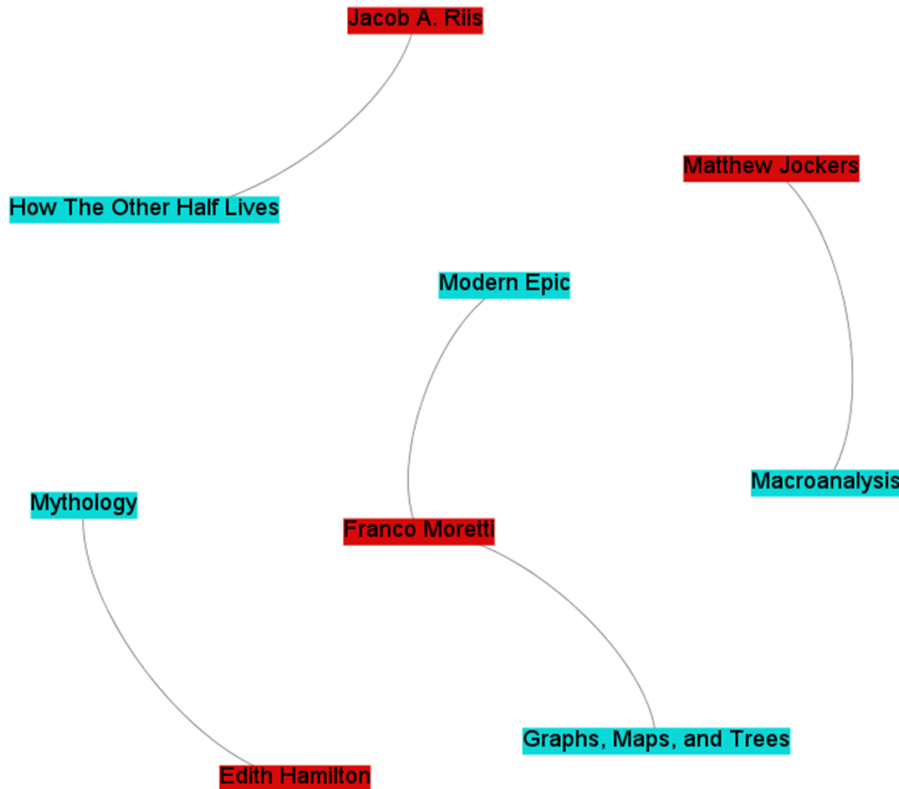
# Author-text network



# Bimodal networks have different rules

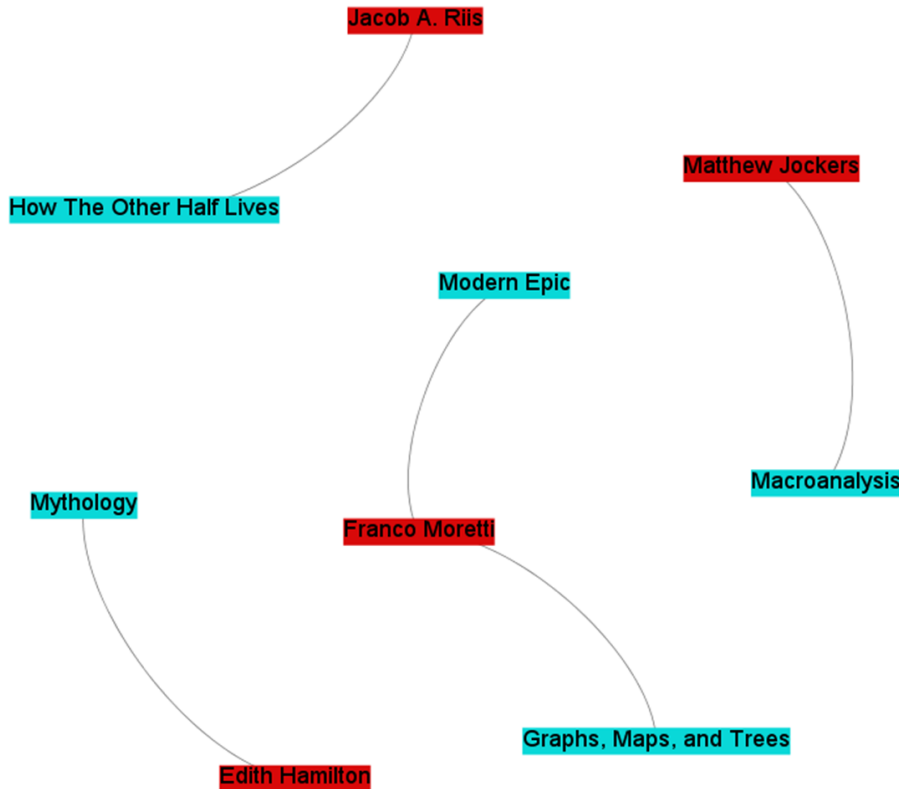


# Bimodal networks have different rules



- Most research is on *single mode networks*
  - "Centrality" assumes single mode

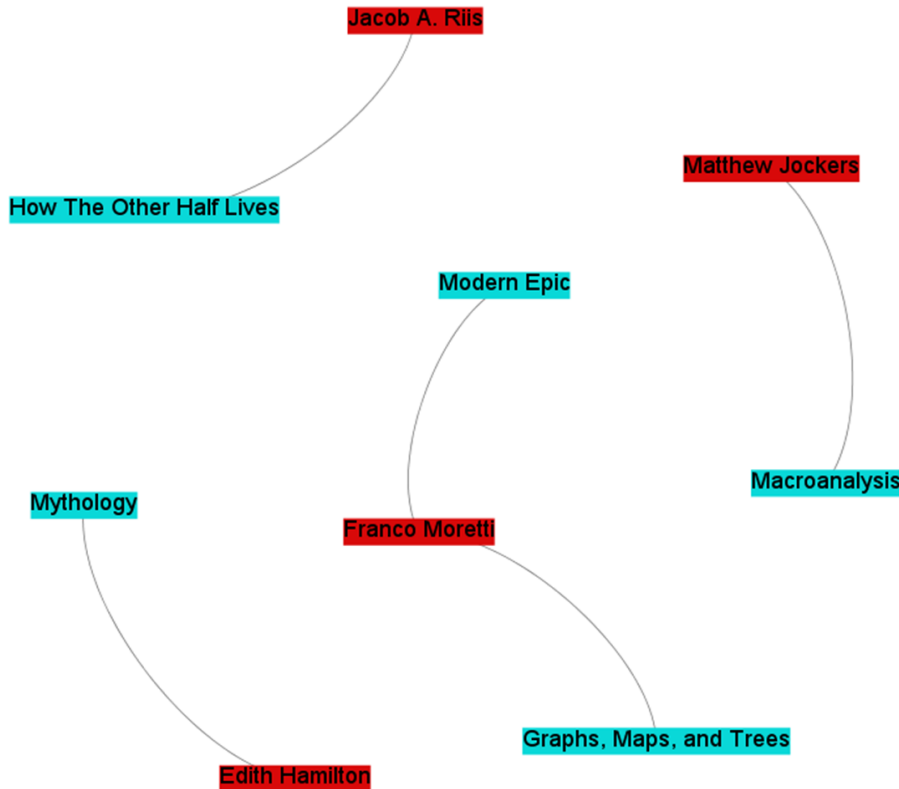
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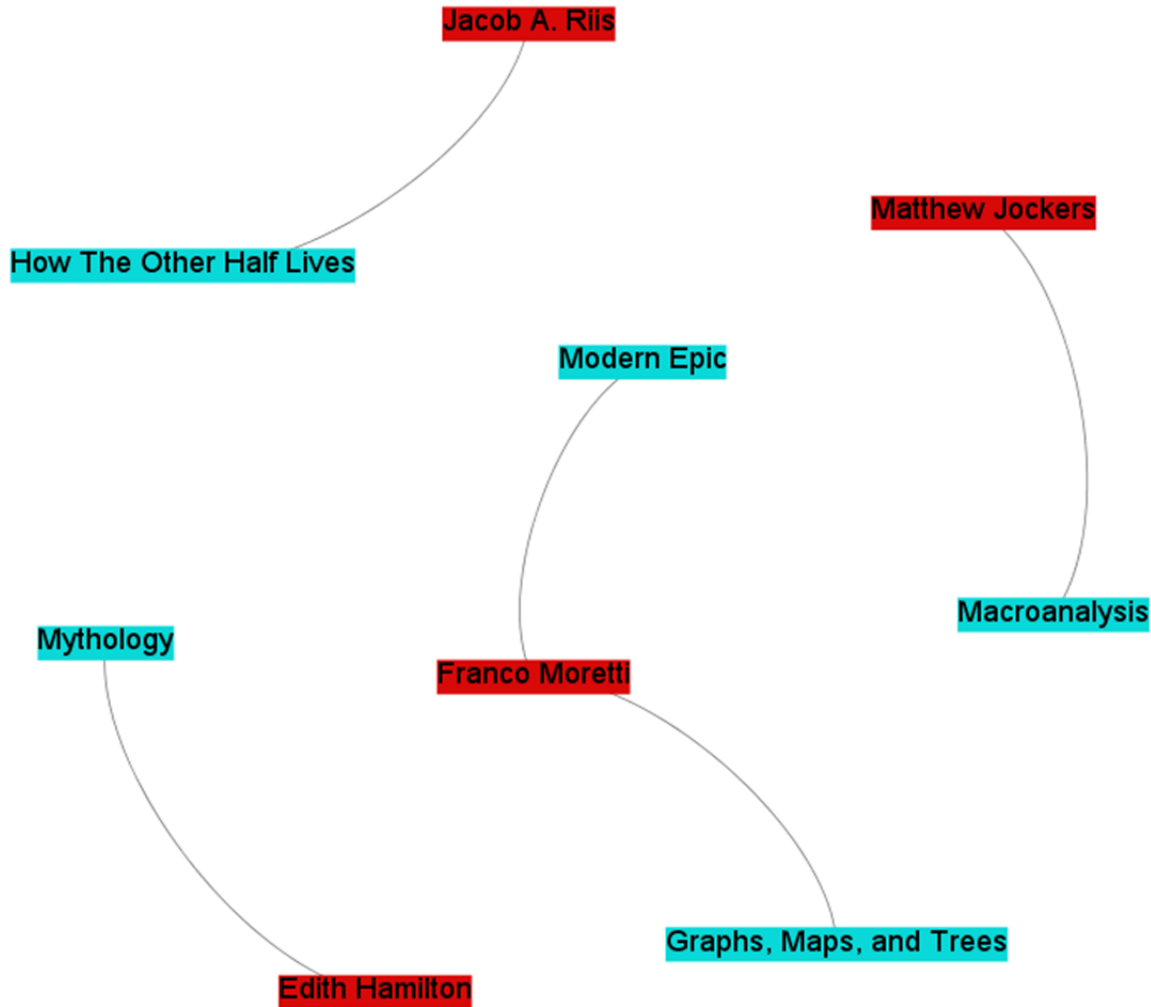
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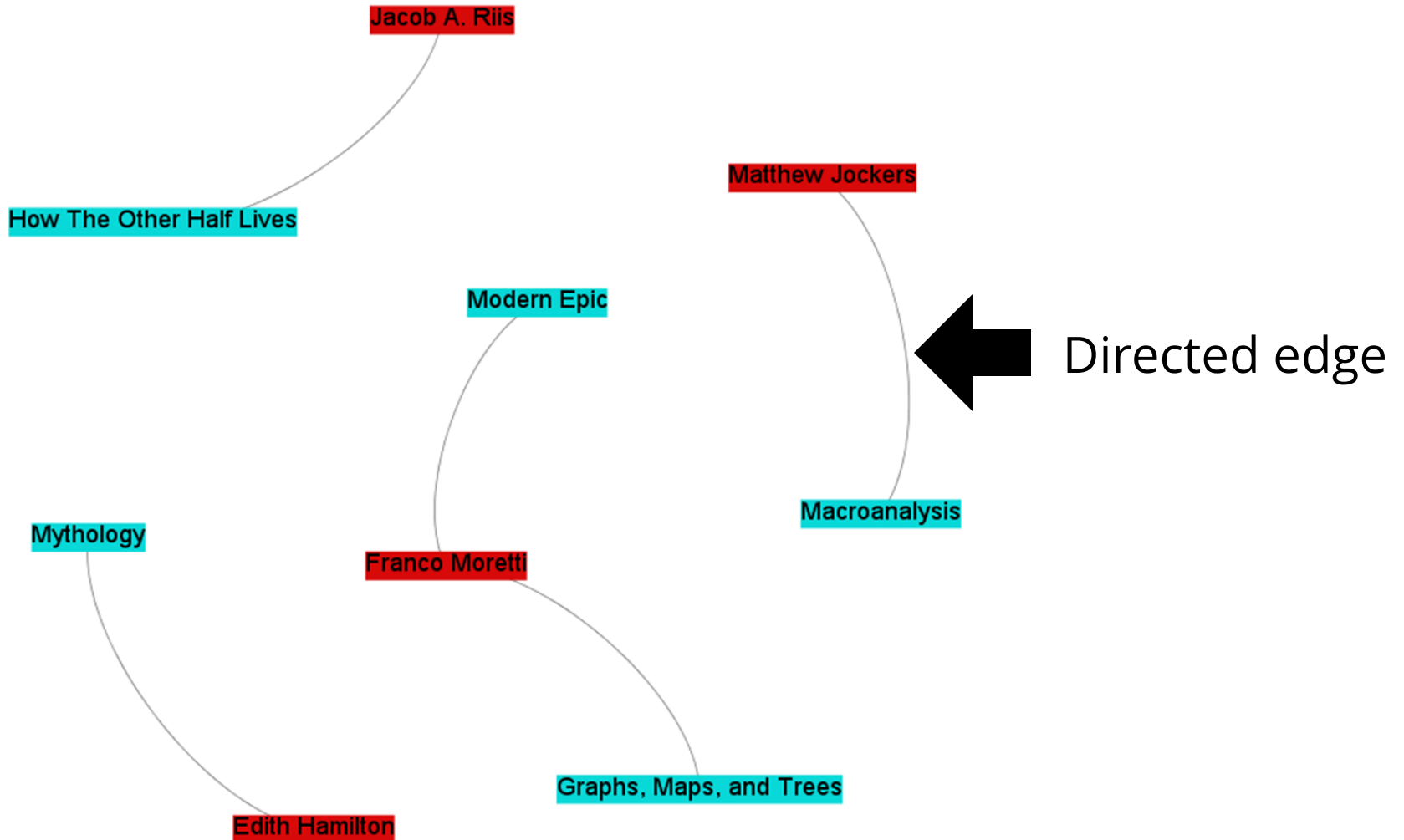
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Remember: we're borrowing methodologies from another field, with different assumptions about data & reality

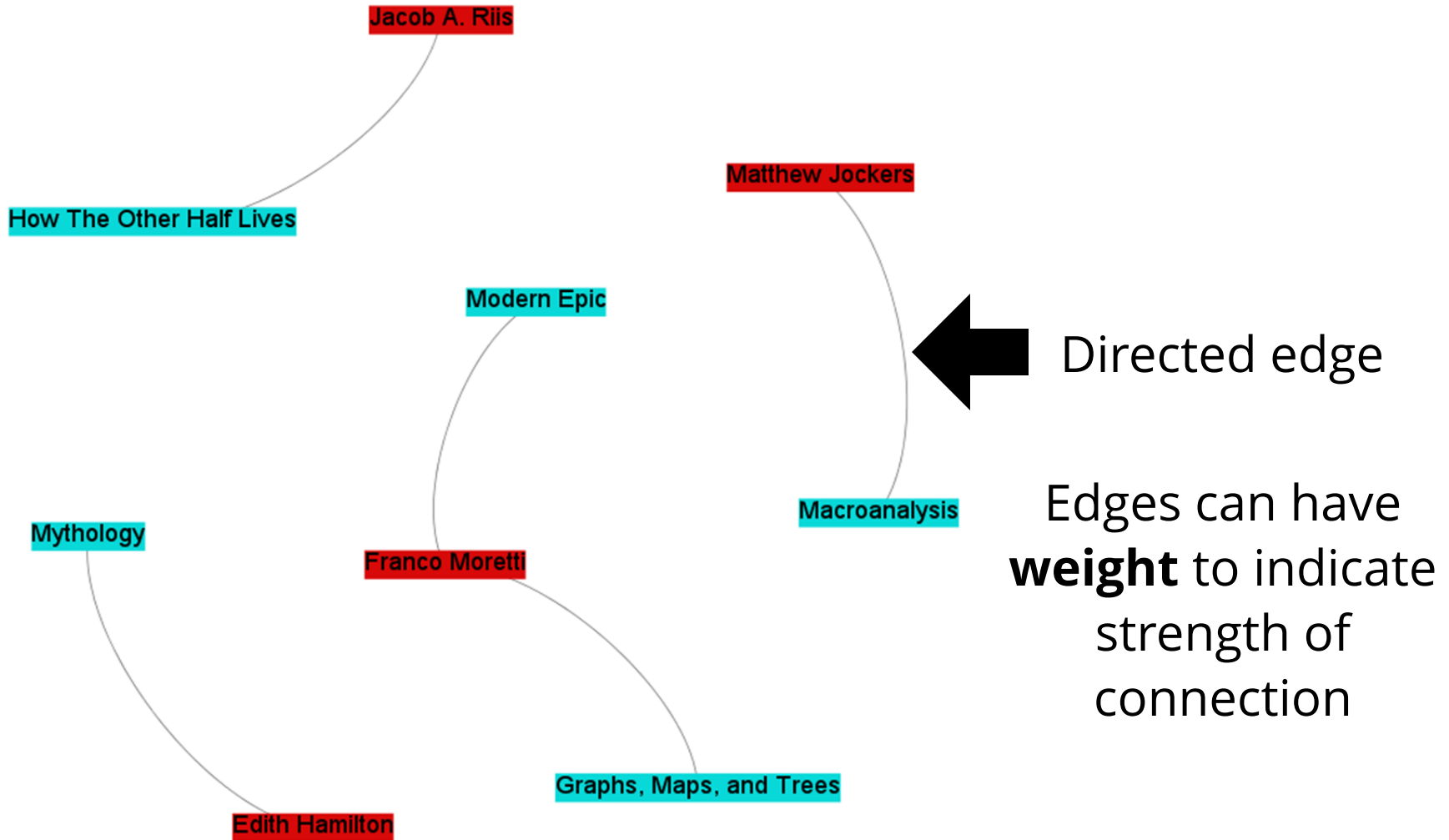
# Edge types



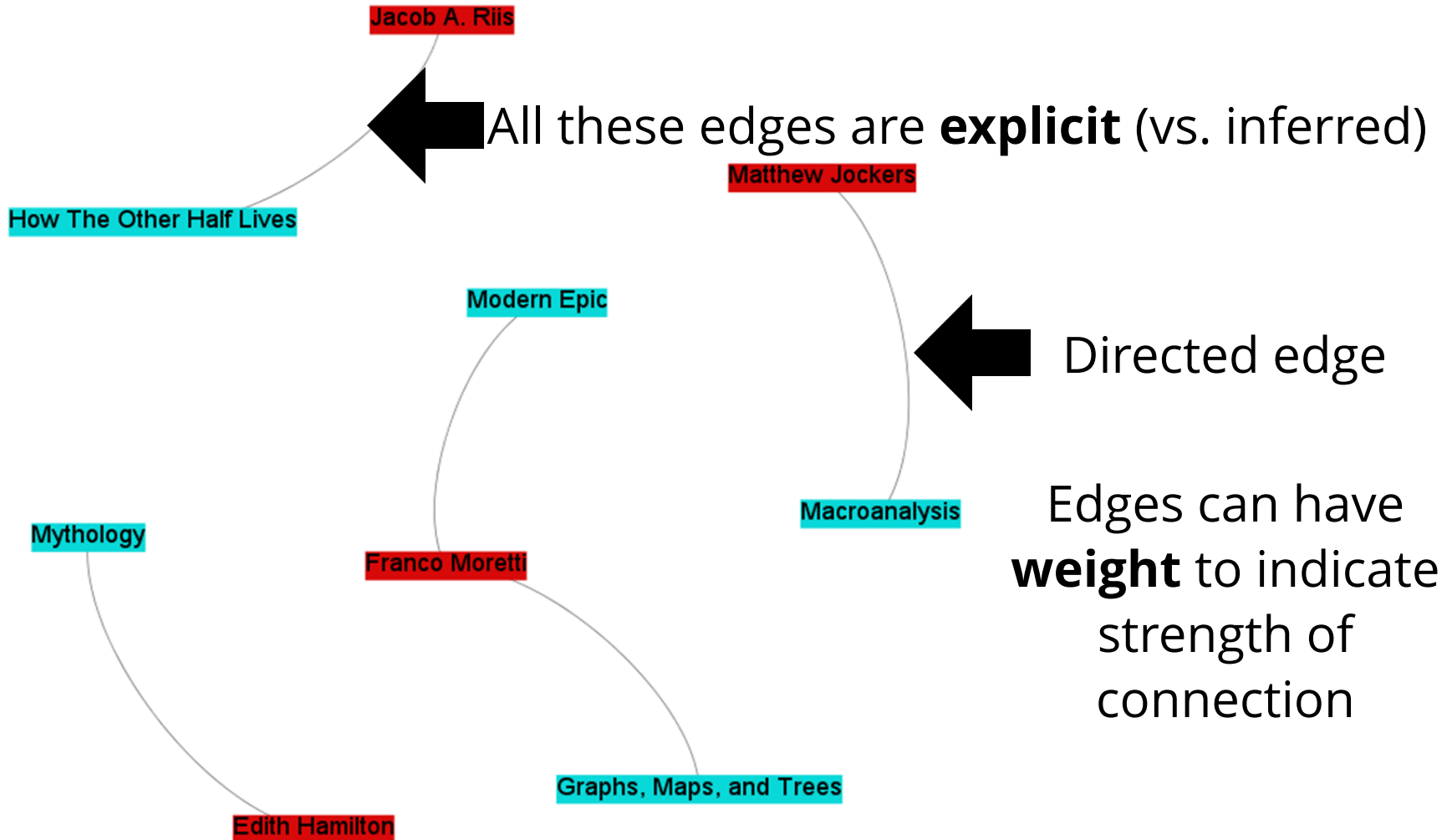
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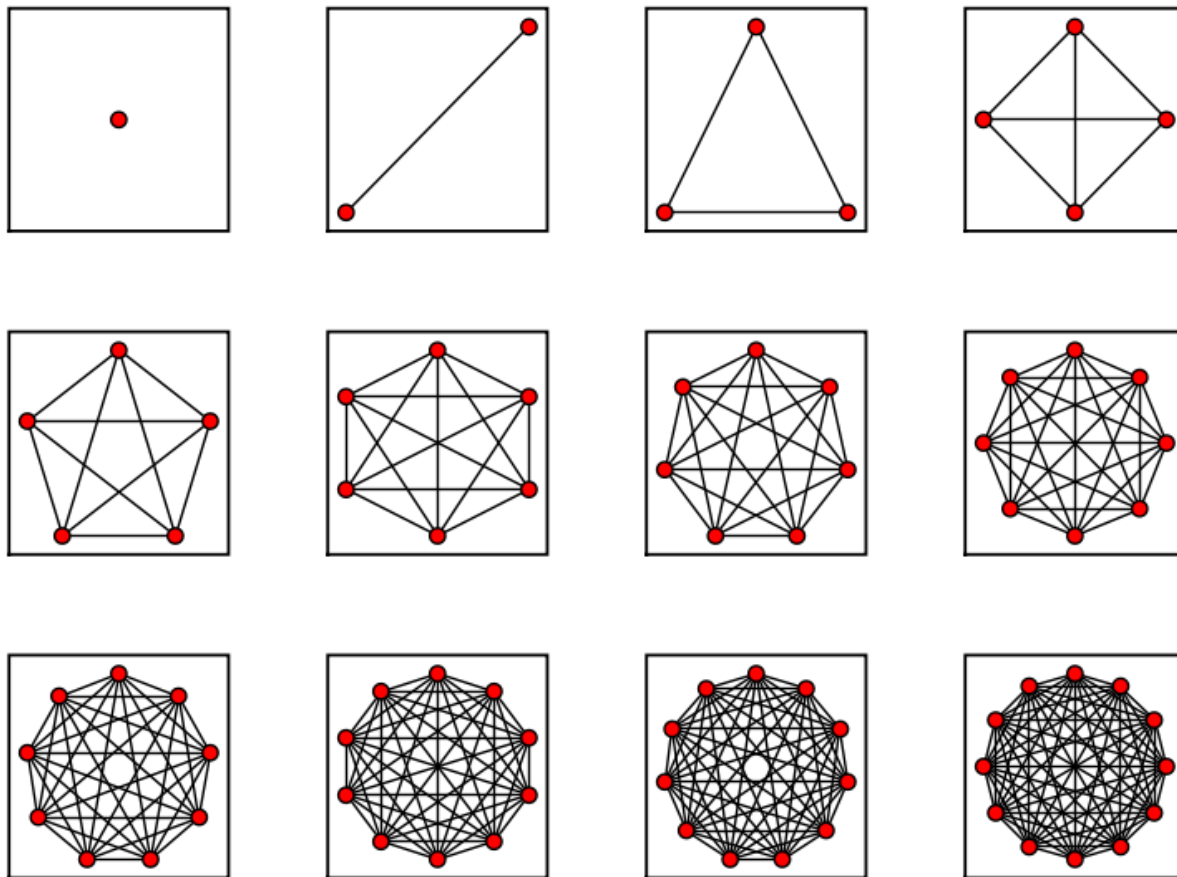
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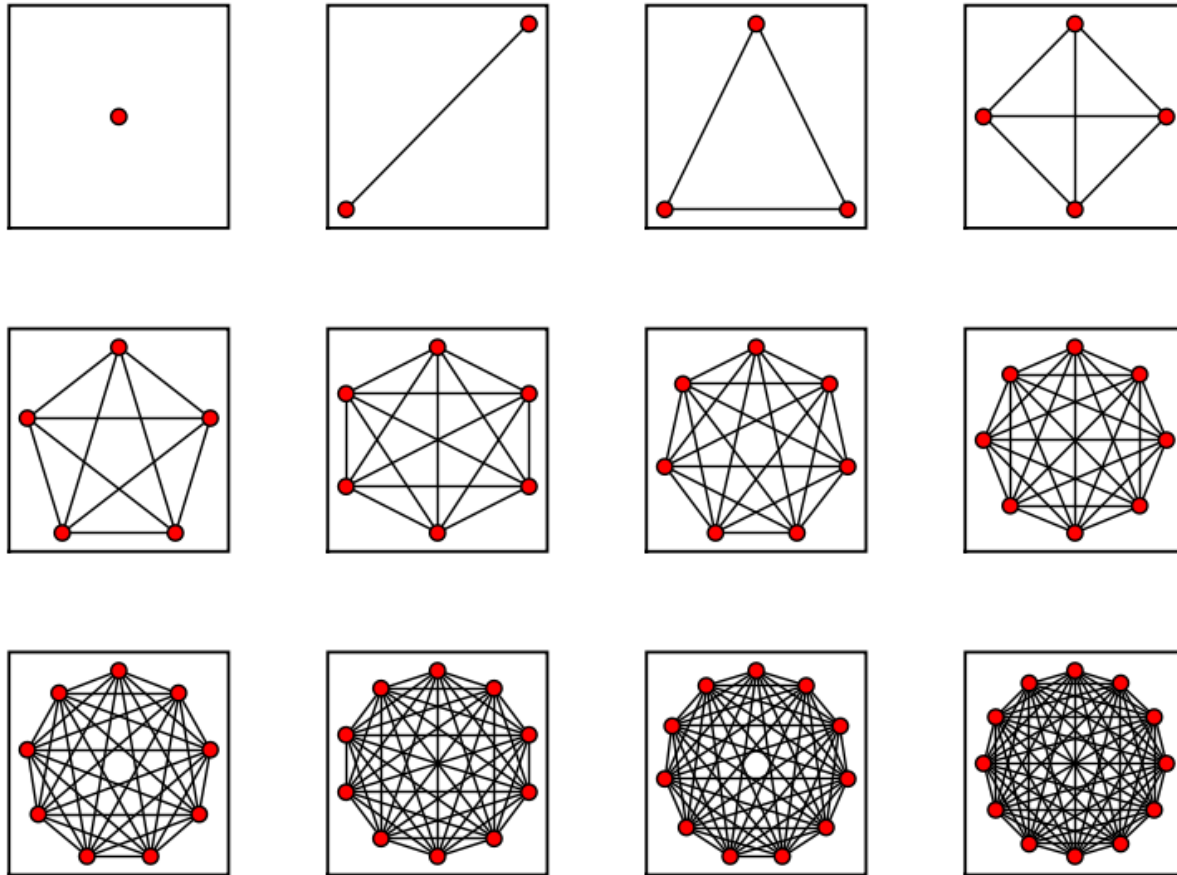
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Everything is related to everything, but community detection & other algorithms work better with *sparse* networks.

# How do we prune reality?





# Palladio isn't picky

