

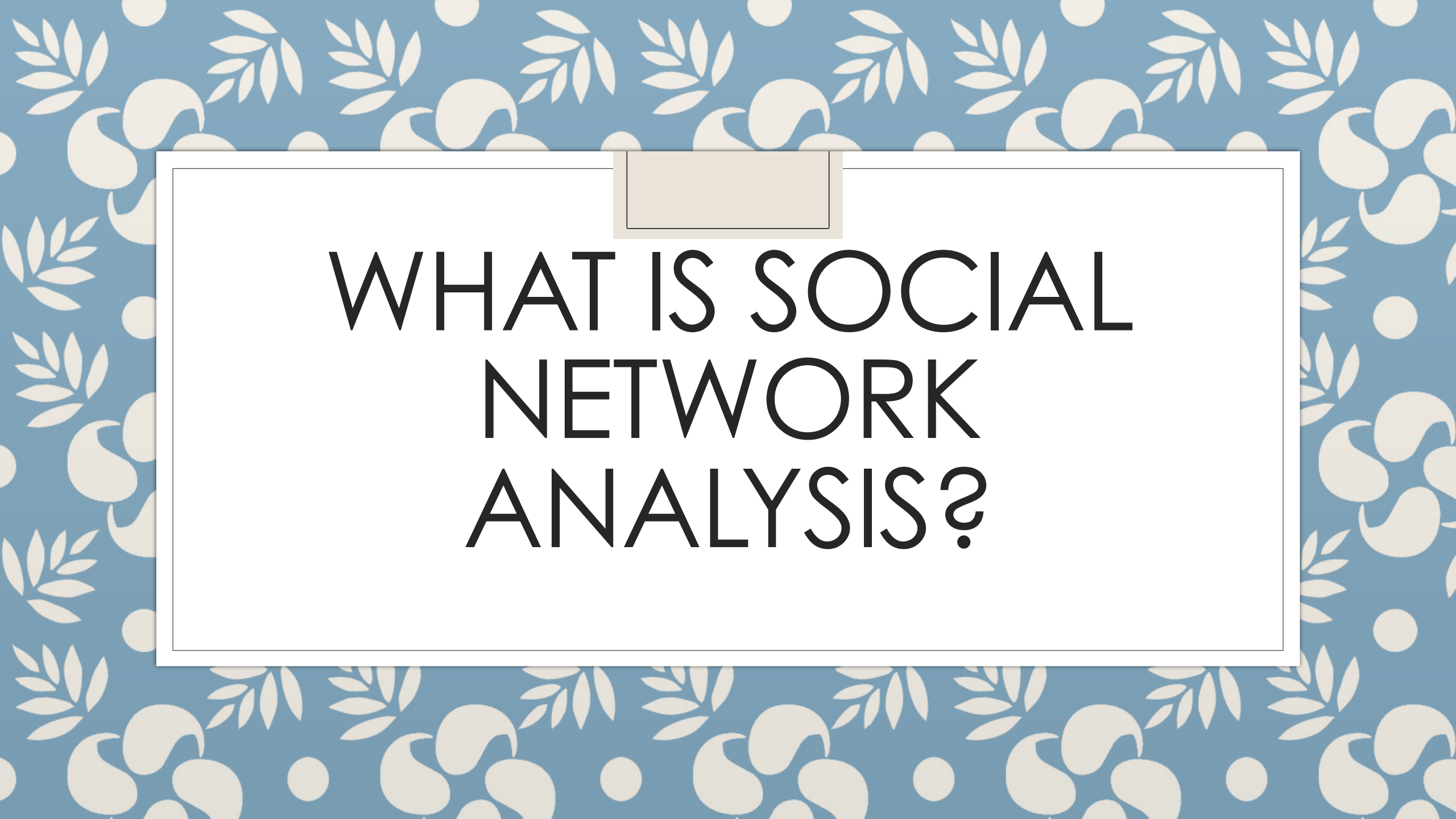


# SOCIAL NETWORK ANALYSIS

Amillia Woods

# Overview

- ❖ Social Network Analysis
- ❖ Mathematical and Visual Analysis
- ❖ Purpose of Social Network Analysis
- ❖ Disadvantages of Social Network Analysis
- ❖ Advantages of Social Network Analysis



# WHAT IS SOCIAL NETWORK ANALYSIS?

# What is Social Network Analysis?

❖ **Social Network Analysis** is constructed on an assumption of the importance of relationships among networking entities. It is the charting and measuring of relationships and ties between:

- People
  - Groups
  - Organizations
  - Computers
  - URLs
  - Other connected units
- ❖ Visual and a mathematical analysis of human relationships



# MATHEMATICAL ANALYSIS

# Visual and Mathematical Analysis

## ❖ Nodes

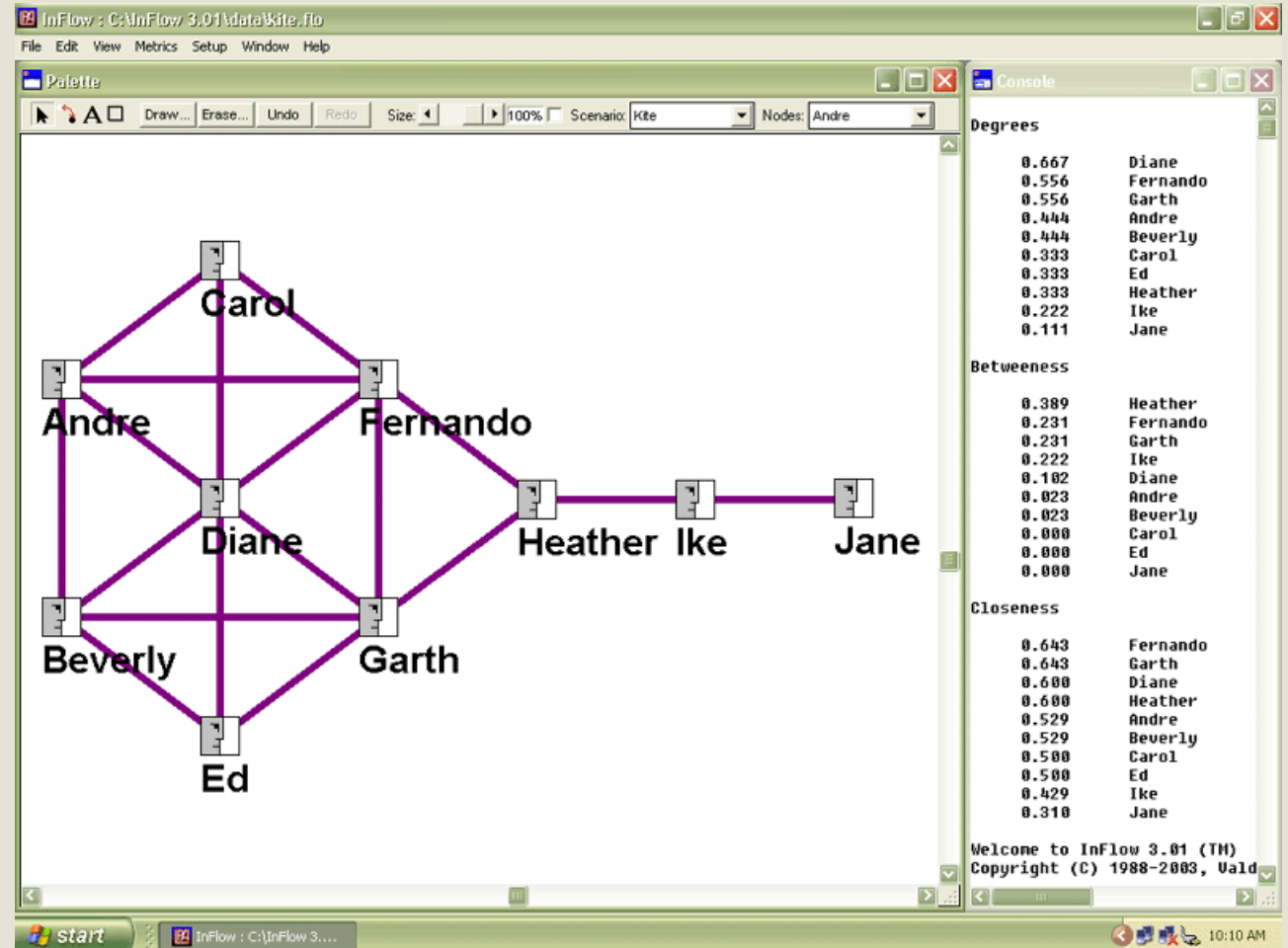
-A point which pathways intersect

-A central or connecting point

## ❖ Degree Centrality

## ❖ Betweenness Centrality

## ❖ Closeness Centrality





# PURPOSE OF SOCIAL NETWORK ANALYSIS

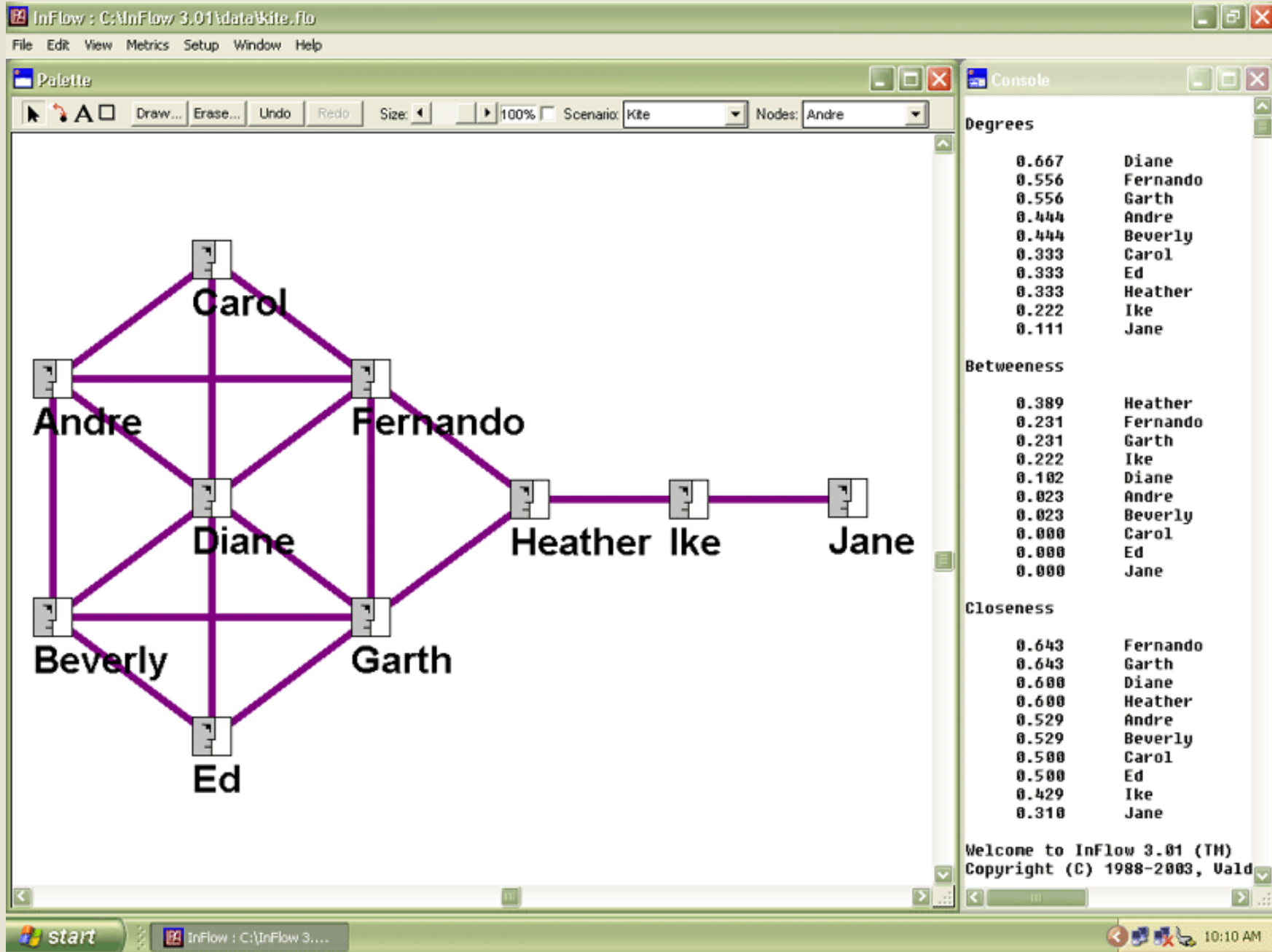
# Why Use Social Network Analysis?

- ❖ Organizational Network Analysis [ONA].
- ❖ Understand networks and their participants
- ❖ Evaluate the location of actors in the network
- ❖ Measuring the network location

These measures give a understanding of innumerable roles and groupings in a social network analysis such as:

- Connectors
- Leaders
- Bridges
- Cluster
- Core of the network







DISADVANTAGE

# Disadvantages

- ❖ Single point of failure
- ❖ Cut off from information and knowledge
- ❖ A node with high betweenness has a significant influence of how everything flows, but it does not in social network analysis
- ❖ Nodes can be removed or damaged
  - unconnected sub-networks
- ❖ A highly central node
- ❖ Connected hub can fail
- ❖ Networks of low centralization fail
- ❖ Not all network paths are equal



# ADVANTAGES

# Advantages

- The relationship between the centralities of all nodes can reveal much about the overall network structure
- Roles and groupings
- Visual
- Less connections the better

# Summary

- ❖ Social Network Analysis
- ❖ Mathematical Analysis
- ❖ Purpose
- ❖ Disadvantages
- ❖ Advantages



? QUESTIONS?

# References

Krebs, Valdis. "Social Network Analysis, A Brief Introduction." *A Brief Introduction to Social Network Analysis by Orgnet, LLC*. N.p., 2000. Web. 01 Nov. 2013.