NetSci High Workshop 2014

www.bu.edu/networks/workshop

Friday July 18 - Student Workshop Day 2

7:00 am – Breakfast (700 Commonwealth Avenue, Warren Towers, BU)

9:00 am – SCI 113

  - "Talk Show #1"

9:30 am – SCI 113

  - Overview of Network Science

11:30 am – Lunch (700 Commonwealth Avenue, Warren Towers, BU)

1:00 pm – SCI 113

  - "Talk Show #2"

1:30 pm – SCI 113

  - "Imaginary Board of Directors Activity" (Brooke Foucault-Welles)

2:45 pm – SCI 113

  - Data Visualization Tour

3:45 pm – SCI 113

  - Group Network Exploration Challenge Assignment

4:00 pm – SCI 113

  - Tips for Making Presentations

5:00 pm – Dinner (700 Commonwealth Avenue, Warren Towers, BU)

Brooke Foucault Welles

Brooke Foucault Welles is an assistant professor in the department of Communication Studies at **Northeastern University**. Broadly, she is interested in how social networks shape and constrain behavior, with a particular emphasis on how new media change the role that networks play in our daily social interactions. Most recently, Brooke's research has examined how networks influence friendship selection in online games and virtual worlds, and how network structure influences the development of trust in computer-mediated groups. She is also interested in how network salience influences individuals' perceptions of the availability of social support, and how age influences behavior in online social networks.

Brooke teaches classes on research methods, social network analysis and children and media. Prior to joining the faculty at Northeastern University, Brooke earned her PhD from the department of Communication Studies at Northwestern University. She also holds BA and MS degrees in Communication Studies and Information Science, respectively, from Cornell University.

Imaginary Board of Directors

Your name:

Many successful organizations accomplish their goals by creating a board of directors, or a small group of people who can support, advise and inspire them. When they form this group, organizations tap into wisdom they normally would not have access to, and they develop a network that can help them achieve their goals.

In this exercise, we would like you to create a board of directors for yourself. This exercise has several parts. First, think of a specific goal you would like to accomplish in the future. This should be something challenging that you hope to accomplish for yourself in the next 2-5 years. You can choose an academic goal, an athletic goal, an artistic goal, a career goal or anything else that matters to you personally.

What is your goal?

Now, we would like you to think about a board of directors who would be useful to YOU PERSONALLY as you work towards your goal. Think about a group of people, real or imagined, living or dead, who can help you achieve your goal. There are no limits on who you can choose for your imaginary board of directors. You may have as many or as few people as you would like on your board. You can pick people you know personally, people you know about but have never met, or people who may not really exist in real life. The key is to pick the best group of people to help you achieve your personal goal.

Ask yourself, what kind of knowledge, resources and skills will you need to be successful? Who, specifically, could provide those things? Fill in the chart below with ideal members for your board of directors. Remember: "think networks" as put together your board of directors!

Board Member Name	Knowledge/Resource/Skill Provided	How well do you CURRENTLY know this person?
		Not at all ○ ○ ○ ○ ○ Very Well
		Not at all ○ ○ ○ ○ ○ Very Well
		Not at all ○ ○ ○ ○ ○ Very Well
		Not at all ○ ○ ○ ○ ○ Very Well
		Not at all ○ ○ ○ ○ ○ Very Well
		Not at all ○ ○ ○ ○ ○ Very Well
		Not at all ○ ○ ○ ○ ○ Very Well
		Not at all ○ ○ ○ ○ ○ Very Well

Now, we would like you to revise your board of directors to include only people you could reasonably meet or interact with. These may be the same people you listed on your ideal board of directors (above), or they may be different people. These do not need to be people you currently know, but they should be people you could possibly come to know.

Sometimes, it will be very easy for you to think of ways to get people to be on your board of directors. But, sometimes it may not be obvious why someone would help you out. But, it may still be possible to include these people in our personal board of directors. Remember, people tend to do things for people who have something to offer them. Think about what you might be able to offer to the people on your ideal board of directors (above). Think about how you might go about getting each person to join your board of directors? How would you reach out? What might you offer? Why would that person want to help you?

Board Member Name	Knowledge/Resource/Skill Provided	How well do you CURRENTLY know this person?
		Not at all ⭕ ⭕ ⭕ ⭕ ⭕ Very Well
		Not at all ⭕ ⭕ ⭕ ⭕ ⭕ Very Well
		Not at all ⭕ ⭕ ⭕ ⭕ ⭕ Very Well
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		Not at all ⭕ ⭕ ⭕ ⭕ ⭕ Very Well
		Not at all ⭕ ⭕ ⭕ ⭕ ⭕ Very Well

Put a star next to the member of your board of directors who you think will be MOST IMPORTANT for helping you achieve your goal.

Make a plan to reach out to this person – when will you contact him/her, and how will you do it?

"Data Visualization Tour"

- Start by showing "The Art of Data Visualization" from Resources page (8 min)

- Simple example of "The Anthill". Explain why this is relevant: tells the story of a simple model developed by a teenager and the interface of art and science.

- Data Visualization Examples

  - Global economic relations
  - Wikipedia recent changes map
  - Here is today
  - Global arms exports & imports
  - Heart music
  - Narratives
  - Hook theory
  - Personal space
  - How far is it to Mars?
  - US gun deaths

Group Network Exploration Challenge

You have until Monday morning to do this challenge in the same group you will be working with throughout the year. Be sure to seek the help of your teachers or graduate students or anyone else!

The challenge is to:

1. Explore Network Attack & Network Optimizer. Imagine that you are a research team for the Department of Defense and you have been asked to present the case for a new version of this software to a room full of general who will decide whether to continue funding or break up your group. Write up a brief summary (under 1 page) that will convince the generals to fund you. Be able to explain this in your presentation and make use of one or more screen shots from the software to make your point. Think of a hypothetical real world example that you can link to the software.
2. Explore NetLogo Models and "User Community Models". After you have looked at many, take one you are most interested in and take time to explore it. Try to understand as much as you can about what is happening. Capture one or more screen shots from one model, which you find interesting and be able to summarize what the model is about and what it can teach.
3. Explore the "Get to Know You" network data we produced through this morning's activity using Gephi and create *your own* visualization of it. Make your visualization such that it is both aesthetically appealing and clear about what kind of network's aspect(s) you want to illustrate.
4. Search online to find and save pictures of examples of networks. Think broadly! Do not only search for networks that scientists have made that look like many of the computer representations you have already seen. You can also download images that may not at all look like networks, but that you think have some network structure in some way, as long as you are able to explain your reasoning. You can also make use of
   http://www.bu.edu/networks/resources/
5. In the 17th floor art lounge you will find large white construction paper, construction paper of assorted colors, yarn, tape, and markers. Using these, plus anything else you want, including recycled materials, create a work of "network art".
6. For 1-4, create a single Word document "report". Make the document as accurate as possible, using good grammar, layout and presentation.
7. Create a presentation for sharing with your fellow workshop participants on Monday morning.
8. By Monday morning, each group must upload their presentation, report, and any other files you need in a **unique** folder inside:
   http://tinyurl.com/netscigroupchallenge

On Monday morning, each group will spend about 5 minutes taking us through what you did.

The only rule is this: **Each member of your group has to participate in the presentation. Everyone must say or do something.**

Good luck!! And have fun!!!