CIS 677: Knowledge-Based Interfaces

Designing Social Networks for Human Behavior

QUESTIONS for TEXT Chapter 3

October 7, 2010

Due: Tuesday, October 12 at 10:00am, 200 Deschutes

Answer the following questions with at least a paragraph. Be precise and succinct in your answers. Make two copies: Turn in one copy to Prof. Douglas at beginning of the class; keep the second one for discussion.

1. What is a social network?

2. What is social network analysis (SNA)? [Check out Google and compare what you find with the text’s definition.]

3. Is SNA an experimental science? What kind of science is it?

4. Explain how an individual is studied in SNA.

5. What is an SNA explanation for the success or failure of an organization? Do you agree? Explain.

6. What are the research questions for the Twitter example for section 3.2.1?

7. Draw a 1.5 degree network.

8. What does it mean to say there are six degrees of separation? Can you draw the network? Explain.

9. How many degrees are in the network show in Figure 3.1?

10. What is an affiliation network? Give an example.

11. Give specific examples in Figure 3.1 of the three types of multiplex edges.
12. How could you automatically find a cluster (sub-group) within a network? Note that Figure 3.1 has two clusters.

13. Define each of these terms:
   - Degree Centrality
   - Density
   - Structural Holes
   - Transitivity
   - Eigenvector Centrality
   - Clustering Coefficient
   - Bridge Scores

14. How does Google page-ranking use SNA?

15. Go to Drew Conway’s blog. Describe the SNA tools there.

16. Why is visualization important for SNA?