CS 193.1: Social Computing

Social Systems and Networks

What is a social system?

Explain in your own words.

Basic premises for social systems

Homo economicus model

- Individuals seek to **benefit themselves** by less effort, more gain or both.
- Individuals prefer acts expected to give more value to themselves.

Homo sociologicus model

- Individuals **working together** create more value than working alone.
- Socialized individuals prefer social acts expected to give more value to the community.

Factors in social system cohesion

Social dilemma

- When one rule contradicts another.
- **Q**: In society, how do we mediate this?

Social order

- Enforces order and reduces anarchy
- It limits freedom and creativity

Tragedy of the Commons

- Failure of managing resources given individual wants
- **Q**: How do we reach equilibrium?

Factors in social system cohesion

Synergy

- Differences between individual work and grouped work actually c**omplement each other.**
- **Zero-sum game**: no sharing of knowledge with competitors so benefits are not shared as well
- **Non-zero-sum game**: knowledge is shared and benefits become hundredfold

How can we represent and measure these social systems?

- By way of social networks, of course!
- A **social network** is a grouping of social entities with connections to one another that are *significant and consequential*.
- **Social network analysis** (SNA) then is a systematic analysis of linkages between these entities.

Next time…

- Social network analysis
- EX3: SNA with NetworkX
- Hands-on Exam