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EECS 472

Project Update 5/18/13

I began by creating a model based on Kellogg, K. C. (2009). Operating Room: Relational Spaces and Microinstitutional Chang in Surgery. *American Journal of Sociology*, *115*, 657–711. I chose this paper because it is featured prominently in the paper I am writing with Jeannette, and also corresponds to a mechanism I am interested in exploring in my dissertation work: the way local mobilization can disrupt larger societal influnces.

**Agent Behavior:**

To Initialize:

Create doctors of three levels of hierarchy (differentiated by shape): interns, seniors and chiefs

Give them opinions about whether the status quo should be defended or reformed

Start them off working the hours that a person in that position traditionally worked

To Go:

Call a team of doctors to conduct rounds: 1 chief, 3 residents and 4 interns

Ask the chief to pick a spot for them to conduct rounds

If privacy is true I pick a spot without other people around

If privacy is false I pick a spot with lots of other doctors around

Ask interns and seniors on rounds:

Assess the expectations of my superiors, and set my actions accordingly

If anyone of higher status expects me to work long hours, I will do so

Otherwise I’ll follow my own opinion.

Ask interns and seniors on rounds:

 Set my opinion based on the doctors of my status or higher on rounds with me

Ask chiefs:

 If everyone else on rounds with me is working shorter hours set my opinion to “reformer”

When they are not doing rounds, ask doctors walk around the hospital randomly

**System Behavior:**

So far, the system is not producing the patterns I expected. In Kellogg’s field-work, the hospital where rounds were conducted privately succeeded in implementing the reforms where the one that held rounds publically didn’t. Thus I would expect full or near full agreement of opinions, and fully reformed actions (shorter hours). Right now the private setting is creating either near-universal “reformer” opinons, but very unstable behaviors; or, if there aren’t enough reformer seniors, it produces a steady state of only traditional actions (long hours).

**Rationale:**

I was trying to follow what Kellogg described in her ethnographic observations.

**Model Output:**

Not yet. I thought I could start from being pretty literal and concrete and get more abstract. But it seems like maybe I’d be better off starting simple even if I’m not sure how its going to connect to Kellogg’s work.

**Question:**

If my model produces different behavior each time it’s run (sometimes matching a reference pattern and sometimes not), does this mean that it’s not an accurate representation of what may be happening in real life? Conceptually it doesn’t seem like it should mean this—history only happens once, so we don’t know what would have happened if it had been run again. At the same time, it doesn’t seem like a very useful model, unless I’m **really** sure that my agent behaviors, parameters, etc. are accurate.

**Next Steps:**

Start from the other end, with a really simple model of agents influencing each other.