The Bad News:

• Economics is a very insular field

• There is a single entrenched methodology (and we like it that way)

• There has traditionally been little regard for research done in other fields

• Many economists think that they don’t like (and don’t use) Complex Systems techniques
The Good News

- The field is (gradually) becoming more open to ideas/methods/researchers from other fields

- Most economists do like Complex Systems, they just don’t know it yet.
Things that interest economists that also interest the rest of us

- Incomplete/Asymmetric information
- Heterogeneity
- Dynamics (especially recently)
- Spatial Effects (recently)
- Robustness of assumptions (very recently)
Things that often don’t interest economists (though they should)

- Social Networks
- Non-equilibrium outcomes (eg: cycles)
- Power Laws (failure of CLT)
- Non-analytic (computational) solutions
- Feedback Loops
- Phase Transitions
Typical Economic Assumptions

- homo economicus (perfect rationality)
- common knowledge (he knows that she knows that he knows...)
- “perfect mixing” (ie: everyone interacts with everyone else)
- equilibrium outcomes

Common Economic Assumptions

- risk neutrality (linear utility functions)
- homogeneous agents
If you’re going to talk to an economist...

- Know your math!
- Know how economists think!
- Talk to a friendly economist first (eg: Me)
  - buzzwords
  - no-fly zones
- Expect certain questions/critisims (no-holds-barred)
  - Non-linearity (uniqueness of equilibria)
  - Computation vs Analytics
  - Non-equilibrium outcomes
Finally...some quotes

- “Oh yeah, complex systems...that was a fad back in the 80s. I read ’Chaos’ and I wasn’t impressed.”

- “But if you treat these systems as non-linear, you get all of these *solutions*...and how can you know which is the right one?”

- “There’s all this talk about Power Laws, but they don’t even know how to estimate them...haven’t they ever heard of Maximum Likelihood?”

- “When you say the word ’system’ it sends up a red flag”

- “Name one economist who has made a big breakthrough using complex systems” (Note that Thomas Schelling had just won the noble prize in economics)