Designing for Complex Adaptive Systems
Cybernetics in Recent Work
Increasingly, we are designing for complex adaptive systems—
systems which involve feedback, learning, and conversation.
Blood glucose + insulin management systems for diabetes patients—an “artificial pancreas”.
Product delivery and set-up systems—the "out-of-box-experience".
Integration of individual disease management systems in a larger ecology.
A smart thermostat is similar to a disease management system.
Integration of individual home systems in a larger ecology.
Machine learning applied to patient EKGs to detect heart disease.
Building a data refinery for satellite imagery.

Event
- Remote sensors
- On-premises sensors
- Online event trackers

Multiple sources
- Streaming
- Near-realtime
- Batch

Analysis
- Wrangle Data
- Build Models
- Make Predictions

Action
- Pre-empt Control Alert
- Multiple uses
  - Reporting
  - Diagnosing
  - Deciding