

Preliminary List of Topics

0. Introduction
  - Models and their significance
  - Scientific locus of the study of communication
1. Behavior of Isolated Systems
  - States; Transitions; Trajectories
  - Fields; Behavior spaces
  - Deterministic vs. probabilistic behavior
  - Markov Processes and flow models of communication
  - Equilibria
2. Coding and Information Processing
  - Semi-isolated Systems: parameters, variables
  - Coding and codes
3. Decomposition of Dynamic Systems and Communication
  - Deductions from Protocol: Diagram of immediate effects, independence, feedback
  - Individual and joint equilibria
  - Process diagrams and programs
  - Memory and communication structure
4. Representational Information
  - Combinatorial possibilities and uncertainty
  - The idea of information; Types of theories
  - Information derivative of messages
5. Variety, Uncertainty, and Incessant Transmission
  - Statistical constraints and structure
  - Uncertainty analysis
  - Multivariate transmission of variety
6. Purpose, Requisite variety and Control
  - Intelligence, its manifestation in selectivity
  - Forms of control: steering, positive and negative feedback
  - Limits on intelligent behavior; The law of requisite variety
7. Very large Systems, Organization and Constraint
  - Decomposition of complexity: constraint analysis, subsystem-hierarchies, factors
  - Regulation of very large systems
  - Structure of organizations and the architecture of complexity
8. Some Properties of Large Systems
  - Evolution and adaptation
  - Self organization, morpheostasis and morpheogenesis
  - Reproduction
9. Some Implications of Cybernetics
  - Epistemological: consciousness and mind, limits of knowing
  - Social: information processing, social control and survival
  - Methodological: Limits of science