Teams: Problem Solving & Decision Making
The mob has no judgment, no discretion, no direction, no discrimination, no consistency. *Cicero*

Madness is the exception in individuals but the rule in groups. *Nietzsche*

When "a 100 clever heads join a group, one big nincompoop is the result." *Carl Jung*

(Forsyth, 2014)
Problem Solving

“… active efforts to discover what must be done to achieve a goal that is not readily attainable.”

(Weiten, 2011, p. 260)

Implies one has to overcome obstacle(s) to reach a solution

Decision Making

You have more than one available course of action and you must make a **CHOICE**
### Why Use Groups?

- More people = More information
- More people = More work
- More people = People can do what they are best at
- Can discuss, process, check information (check for errors, etc.)
- Standards for deciding (e.g., majority rules)
- More likely to follow through with part of group that decided

### Why Not Use Groups?

- Group may not recognize correct answer, even if proposed
- Oversample shared information
- Work may be done by a few (social loafing)
- Discussion can be manipulated
- Group polarization (includes risky shift)
- Possibility of groupthink

(Forsyth, 2014)
A Model of Decision Making

1. Orientation:
   - Identify the problem, setting goals
   - Plan the process
   - Develop a shared mental model

Time spent in this stage may improve collaboration and coordination among team members and help with time management

(Forsyth, 2014)
A Model of Decision Making

2. Discussion:

- Recall information
- Exchange information
- Process information
- Detect inaccurate information

Steps must be taken to avoid short-circuiting each of these objectives by things like poor discussion skills and "death by meetings."

(Forsyth, 2014)
Example: Who speaks in discussions

(Forsyth, 2014)
Other Problems with Team Discussions Include:

- Poor communication skills
- Egocentric/narcissistic behavior
- Nonparticipation
- Sidetracking ("squirrel"!)
- Participant and other interruptions
- Negative leader behavior
- Negative attitudes and emotions

A Model of Decision Making

3. Making Choices by:

- Delegation
- Averaging: Statistical aggregation
- Voting (includes Majority or Plurality)
- Consensus (discussion to unanimity)
- Truth wins/Truth-supported wins
- Random choice

(Forsyth, 2014; Franz, 2012)
A Model of Decision Making

4. **Implementation:**
   - Carry out the decision
   - Evaluate the decision

(Forsyth, 2014)
<table>
<thead>
<tr>
<th>Type of Error</th>
<th>Examples</th>
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<tr>
<td><strong>Sins of Commission</strong></td>
<td><em>Belief perseverance</em>: reliance on information that has already been reviewed and found to be inaccurate</td>
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<td><em>Sunk cost bias</em>: reluctance to abandon a course of action once an investment has been made in that action</td>
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<td><em>Extra-evidentiary bias</em>: the use of information that one has been told explicitly to ignore</td>
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<td><em>Hindsight bias</em>: the tendency to overestimate the accuracy of one's prior knowledge of an outcome</td>
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<td><strong>Sins of Omission</strong></td>
<td><em>Base rate bias</em>: failure to pay attention to information about general tendencies</td>
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<td><em>Fundamental attribution error</em>: stressing dispositional causes when making attributions about the cause of people’s behaviors</td>
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<td><strong>Sins of Imprecision</strong></td>
<td><em>Availability heuristic</em>: basing decisions on information that is readily available</td>
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<td><em>Conjunctive bias</em>: failing to recognize that the probability of two events occurring together will always be less than the probability of just one of the events occurring</td>
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<td><em>Representativeness heuristic</em>: excessive reliance on salient but misleading aspects of a problem</td>
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(Forsyth, 2014)
Groups may not check their decisions. Three of the more well-known problems include:

- Denials of Responsibility
- Abilene Paradox
- Entrapment (sunk costs)

(Forsyth, 2014)
Group Polarization and Risk

Group polarization: A shift in the direction of greater extremity in individuals' responses

(Forsyth, 2014)
Groupthink

What It Is

Members of a highly cohesive decision-making group, fail to critically evaluate or fully discuss the likely outcomes of their decisions.

(Janis, 1972)
Groupthink

**Antecedents**

- ✓ High cohesiveness
- ✓ Insulation from outside information
- ✓ High stress (external & internal)
- ✓ Lack of critical processes for search and evaluation of information
- ✓ Directive leadership

(Janis, 1972)
Groupthink: Symptoms

- Illusion of invulnerability
- Illusion of unanimity
- Illusion of group morality
- Stereotyping the "enemy"
- Self-censorship
- Mind guards
- Direct pressure

(Janis, 1972)
Groupthink: Outcomes

- Failure to fully consider all choices/options
- Failure to consider all outcomes of preferred choice
- Confirmation and disconfirmation biases
- Failure to plan for contingencies (i.e., Plans B, C, D...) for when things go wrong

(Janis, 1972)
Groupthink: Ways to Avoid It

- Assign critical evaluator role
- Leader adopts impartial stance
- Separate groups work on same problem
- Use information provided by non-group members
- Use outside experts
- Devil's advocate role (rotated)
- Devote time to consider alternative explanations and signals
- After consensus, reconsider "next best alternative"
- Hold a "second chance" meeting

(Janis, 1972)
A Model of Groupthink

Example

(Forsyth, 2014)
Interventions for Team Decision Making

- Nominal Group Technique
- Dialectical Inquiry
- Multivoting

(Franz, 2012)
Nominal Group Technique

• Individuals silently create solutions

• Members present and record using a round-robin technique

• Group discusses ideas one at a time for clarification and evaluation

• Group members silently vote on ideas that were presented using a previously-decided rule

(Franz, 2012, p. 168)
Nominal Group Technique – Decision Rules

- Consensus/unanimity
- Majority rules
- Plurality
- Truth wins
- Truth-supported wins

(Franz, 2012, p. 168)