# Negotiation and Competitive Decision Making

# **Before You Leave Class Today!**

#### • Pick Up

-Confidential Information for SALT HARBOR: Brims versus Easterly

• Identify

your negotiating partner

### **Next Class**

#### • **DEBRIEF**

- -Street Streaker & Alpert-Raiffa Experiment
- NEGOTIATE
  - -Salt Harbor
  - -In class matchups

### **Course Objective**

Improve your ability to achieve your negotiating objectives in a responsible fashion.

### **Today's Themes**

- HOW WE LEARN
- PREPARATION
- SPLIT THE PIE!
  - Distributive Bargaining Principles
- COGNITIVE BIASES
  - Anchoring affects negotiation outcomes
  - A first controlled feedback experiment

# Negotiation is a Core Competency!

#### **Avoid Negotiation Sand Traps**

Leigh Thompson Ch 1 page 5

- Leaving money on the table
  - "Lose Lose" Both parties could do better
- Settling for too little *or* paying too much
  - The "Winner's Curse"=>You achieve agreement but give up too large a portion of the bargaining pie
- Walking away from the table
  - You reject terms that are demonstrably better than any other option available
- Settling for terms that are worse than the alternative
  - "Agreement bias" or you agree to agree even when other alternatives are better

# How We Will Learn

• Practice

Calibrated Feedback and Results Analysis

 To avoid self-reinforcing ineffectiveness

Outcome Based Evaluation

• Seeing how others See You!

# Barriers to Effective Negotiation

Thompson Ch. 1 Pages 6-7

- Egocentrism
  - Self congratulatory views: In Lake Woebegone, all children are above the town average in intelligence

- Confirmation Bias
  - Tendency to see what you want to see when appraising your own performance

**Barriers =>Self Reinforcing Incompetence** 

"We tend to be blissfully unaware of our own incompetence!"

#### Mergers and Acquisitions

- "CEOs develop overconfidence"
- "They overly attribute their influence when deals are successful"
- "This leads to MORE deals that are unsuccessful"
- "The problem persists even when promised significant financial rewards for accurate appraisal of one's own performance"

#### Thompson Page 7 cites Billet et al MGT SCIENCE (2008)



- All negotiations are fixed sum
- Good Negotiators are born

• You need to be either tough or soft

• Experience is a great teacher

- Good negotiators take risks: (*translation*)
  - Good negotiators *make threats* in a disciplined and organized fashion
  - Good negotiators know how to balance risks and rewards
- Good negotiators rely on intuition:
  - Usually not! Behavior is often influenced by arbitrary and irrelevant aspects of a setting
  - Good negotiators are self-aware
  - They can articulate the rules that guide them and police against being fleeced

- **Our focus** =>*skill building and learning by doing*
- *Doing* negotiations in different substantive contexts *sharpens our ability* to recognize untested assumptions, alternative explanations
- *Increases our sensitivity* to what works, what doesn't work and why.

# **Negotiation in a Nutshell!**

#### • **PARTIES**

- Who are the real parties to a negotiation?
- **BATNAS** 
  - What will negotiators do if they don't reach an agreement?
- INTERESTS
  - What are the parties basic needs and priorities?

From "Negotiation Analysis: An Introduction" by Michael Wheeler HBS 9-801-156

#### • VALUES

- How can value be created and who is likely to get it?
- **BARRIERS** 
  - What are obstacles to agreement and maximization of value and how can they be overcome?
- POWER
  - What levers of power does each negotiator possess and how should they be deployed?
- ETHICS
  - What is the right thing to do?

From "Negotiation Analysis: An Introduction" by Michael Wheeler HBS 9-801-156

### TOPICS

#### I. Distributive Bargaining—Split the Pie!

- Street Streaker
- Salt Harbor
- **II. Competitive Gaming** 
  - Oil Price Negotiation— Iterative Prisoners' Dilemma
- III. Fair Division
  - The Rothman Family Art Collection
  - Calculating the Efficient Frontier
- **IV. Contingent Contracts** 
  - Jessie Jumpshot

#### V. Mixed Motive—Integrative Bargaining

- Nelson Contracting
- Alphexo vs. Betonn (negotiating an IT venture)
- Winemaster.com (sale of an online wine enterprise)
- CP Hong Kong vs. MegaMarket USA (email or text-message negotiation)

#### **VI Balanced Concerns Negotiations**

- Stakes of Engagement
- Aerospace Investments

#### **VI. Many Party Negotiations**

- Teams: Eureka vs Flagship Renegotiate
- Welsh Water Mgt-Union Negotiation

### **SCORING & GRADING**

### Scoring

#### <u>Winemaster</u>

*Outcomes* =>*Net Gain*: \$750 K

#### <u>HomeBase</u> *\$1,200 K*

#### **Overall Class Statistics**

Average Net Gain:	\$650 K	\$1,100 K
Standard Deviation of	ſ	
Net Gain:	\$1,200 K	\$1,600 K
Z-Se	cores	
$Z_{Winemaster} = \frac{(\$750 - \$6)}{\$1200}$	$\frac{550}{5} = .083$	
	$Z_{Homebase} =$	= .0625

### **Preparation Survey**

• A "Best Effort" response will receive a +0.25 Z-score increment

# **Subjective Valuation Survey**

• You will be asked to express your opinions about your negotiation counterpart

• You will receive +0.25 Z-score points for completing the survey

• We will summarize responses and feed the summary back to each of you at the course end

### How Well Do You Think You Did?



23

# **Negotiation Dance Records**

- Record the sequence of offers made by you and counter-offers made by your counterpart:
  - Amstore versus Nelson
  - Stakes of Engagement
  - Aerospace Investment
- Enter record using the online survey
- You will receive +0.25 Z-score points for entry

# The Fog of Negotiation

• Your negotiation dance records will help us decipher why multiple issue negotiation trajectories vary wildly....even when negotiator role information is held fixed

## **Distributive Bargaining**

Principles and Key Ideas

### Outcome

• Who received which tangible goods?

- Net Gains
  - Yours
  - Your Negotiating Counterpart's
- "See-Saw" or "Tug of War" outcome

### **Key Power Source**

#### • **BATNA** =

**Best Alternative to No Agreement** 

# Other Sources of Power in Negotiation

- Authority
  - Chain of Command
  - Moral
- Relational
  - Friends, Family, Tribe
- Ability to Reward
- Ability to Punish
- Knowledge

# Distributive Bargaining Principles

- Target Point=>What do I want?
  - Your preferred settlement, taking into account limits imposed by the interests of your counterpart

### **BEST ALTERNATIVE to N0 AGREEMENT = BATNA**

**NOT a wish->** Objective Reality determines it!

#### Real World DYNAMIC-> a function of market forces, changing environment.

→ Changes as available alternatives change

- **Bargaining Zone--the region between** parties' reservation points
  - Positive when parties' reservation points overlap
  - Doesn't exist when there is no overlap

### • Bargaining Surplus

- Amount of overlap produced by reservation points
- Measures the *size* of the bargaining zone



#### Bargaining Zone = Zone of Possible Agreement or ZOPA

# The Zirconia ZT Sale

- Marcia walks in with no plan:
  - No counter offer to the Zirconia sticker price
  - No thought about trade-in value of her car
  - No thought about max she will pay for a given bundle of options
  - No thought about extras, prep, insurance fee, etc.
  - No thought about financing options and trade-offs

# Prepare, Prepare, Prepare!

• Determine your BATNA

• Improve your BATNA if possible

• Think through tactics in advance

Understand the *interests* of your negotiating counterpart(s)

• Self-evident in formal zero-sum and nonzero sum games

• **NOT** self-evident in multiple issue negotiations where each party possesses private information

• Information about BATNA's usually arrives through the dynamics of negotiation

# ANCHORING

People make estimates by starting from an *initial value* and adjusting to provide a final answer.

Adjustments are typically insufficient

### Calibration

- Prior to each of 84 days the U.S. Weather Bureau announced a 0.60 probability of rain, snow or both
- It rained or snowed (or both) on 49 of these 84 days
- 49/84 = 0.58, close to 0.60



The Bureau is well calibrated for announced probabilities of 0.60.

• An initial value is a *psychological anchor* 

- Large and systematic departures from accuracy can occur
- Facts:
  - Unless carefully trained, individuals tend to be poorly calibrated.
  - Adjustment is almost always insufficient.

In *Global Catastrophic Risks*, eds. Nick Bostrom and Milan Cirkovic Eliezer Yudkowsky Singularity Institute for Artificial Intelligence Palo Alto, CA

- "Despite all dangers and temptations, it is better to know about psychological biases than to not know.
   Otherwise we will walk directly into the whirling helicopter blades of life."
- "But be very careful not to have *too much fun* accusing others of biases. That is the road that leads to becoming a sophisticated arguer - someone who, faced with any discomforting argument, finds at once a bias in it. The one whom you must watch above all is yourself."

Alpert-Raiffa Experiment

# A *learn by doing* controlled feedback exercise

 Greater New York City's Metro Area is more populous than LA's. What is the New York CMSA in 10<sup>6</sup> people?

2. What *fraction* of the Earth's surface lies above latitude 66° known as the Circum-Arctic?

3. 100 avid basketball fans were asked, "Does a player have a better chance of making a shot after having just made his last two or three shots than he does after missing his last two or three shots? What *fraction* answered YES?

# Alpert-Raiffa Experiment

- Individuals are asked to specify 50-50 probability intervals [*inter-quartile ranges*] for a large number of uncertain quantities such as:
  - NYC Metro Area population in millions
  - Circum Arctic as a fraction of Earth's surface
  - Fraction of basketball fans who believe in the "Hot Hand"

# Fractiles

- 0.25 Fractile:
  - The value  $x_{0.25}$  of an uncertain quantity such that *you believe* there is a <sup>1</sup>/<sub>4</sub> chance that it is less than or equal to  $x_{0.25}$  and a <sup>3</sup>/<sub>4</sub> chance that it is greater than  $x_{0.25}$
- 0.75 Fractile:
  - The value  $x_{0.75}$  of an uncertain quantity such that *you believe* there is a <sup>3</sup>/<sub>4</sub> chance that it is less than or equal to  $x_{0.75}$  and a <sup>1</sup>/<sub>4</sub> chance that it is greater than  $x_{0.75}$



### Outcomes

- Much *narrower* ranges than 50-50 appear
  - -Such interval estimates reflect more certainty than is warranted by available knowledge

• 36% is a pseudo semi-constant!

- Irrelevant numbers can serve as *anchors* and influence perception of the bargaining zone:
  - Reader Example: 81% of residential real estate agents in the survey said they did not use list price to estimate sales price
  - Nevertheless, a "list price" manipulated by 12% and shown to agents resulted in significant differences in their estimates of the property's sales price
  - The average price with a low list price was
    15% lower than that for the high list price

### **First Offers as Anchors**

• Does making the first offer lead to a better outcome for you?

• *Translation*: "Does anchoring work?"

#### *Hint*: Think interactively!

# Subjective Values In Negotiation

- Affective = Feelings and opinions about:
  - The Objective Outcome
  - The Process
  - "Myself"
  - My Negotiating Counterpart
    - Fairness
    - Empathy
    - Her outcome

# Negotiating Sale of the Street Streaker

Some Big Questions!

- Reveal your reservation price?
  - No! Unless it is very, very good. Seldom the case
- Lie about your reservation price?
  - No! You can back yourself into a corner and fail to reach agreement
- Try to convince your counterpart that her BATNA is no good?
  - Probably Not. Only if you have supportable evidence that it is *really* no good
  - Beware of a Boomerang effect: people often do the opposite of what you want them to do

- Tough or Soft?
- You should be *neither*:
  - Too tough may blow the deal
  - Too soft, you give away your bargaining surplus
- Ideal:
  - Try to make an offer in the bargaining zone, not outside
  - IF you are certain of your counterpart's BATNA, offer just slightly better

MIT OpenCourseWare http://ocw.mit.edu

15.067 Competitive Decision-Making and Negotiation Spring 2011

For information about citing these materials or our Terms of Use, visit: http://ocw.mit.edu/terms.