

# “Improving Negotiations and Executive Decision Making by Applying Game Theory”

**BIO CEO & Investor Conference – New York**

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*Teaser*

This workshop  
covers...

# Objective of the Workshop

By participating in this workshop, you will learn how to:

- Improve your **decision making** by acquire a systematic framework for decision making using Game Theory.
- Achieve better negotiation results by applying **advanced negotiation techniques**.
- Enhance your **influencing skills** by applying learnings from the BD practice.
- Master new strategies to steer business interactions.

Methods:

- Real-life pharma/biotech cases
- Learnings from advanced business development practice
- Game theory
- Interactive sessions & discussions
- In-class exercises

Participants will leave the workshop with a **negotiation and decision making toolkit** specifically designed for Senior Management.

- Is the science of strategic decision making
- Offers a useful framework for assessing the options and analyzing decisions
- Unveils your partner's choices
- Enables you to influence the outcome



Look ahead and reason back to achieve the desired outcome



# In-Class Exercise: First & Second Offer Strategy in Negotiations

## In-class exercises

- 2 players and two piles of bricks
- The player who has to make the next move picks one of the piles
- Number of bricks to be removed: one, all or any number in between
- Players move sequentially
- The player who gets the last stone wins



### Lesson:

- If there is a first mover advantage: go first
- If there is a second mover advantage: make you opponent's move (avoid informational disadvantage)!

The idea of sequential rationality helps you to derive your optimal strategy

# Case Study: Behring Pharmaceuticals' Decision on the Project with Mediterranean Biotech

Mediterranean Pharmaceuticals and Behring Biotech have just finalized next year's budget for four projects.

A month later at an internal decision making committee of Mediterranean a additional clinical study for 2019 is proposed.

The new study is not part of next year's budget

If Mediterranean does propose the study it will lead to issues with Behring on the budget.

At an internal decision making committee of Behring concerns about one of the budgeted projects were made.

If Behring does bring up the possible cancellation of the project it will lead to issues with Mediterranean.

**What should both companies do?**



# Look at All Options *at the Same Time*



- Harvard Business Review: examine one option at a time (sequential DM) or review all our DM options together
- People were on average 22% more likely to choose the best option when they viewed all options together rather than one at a time
- Websites – companies tend to show one product at a time.....
- To make better choices look at all your options at the same time

# Case Study: John and the Phase III Study Design #1

John's first meeting in the afternoon was with Carla Christiansen, Head of Clinical Development. Carla would like to receive John's approval for the Phase III study design for the company's lead oncology compound, Diatuzumab. The company had conducted a successful Phase II study and for both active arms, the high dose (40 mg/kg) and the low dose (5 mg/kg), the endpoint was met. Carla has been impressed by the data and makes her case that Diamond Pharmaceuticals should go forward with a Phase III study with a high dose arm. The efficacy of a high dose is impressive. Ovarian cancer is a difficult cancer type to treat, but Diatuzumab might be able to overcome the hurdle where many other compounds failed. John asks Carla to show the slide with the efficacy data. On first sight, the high dose was the best option but the low dose was not far off. ....tbc.....



**Should John decide for either the high-dose or low-dose arm?**

# Case Study: John and the Phase III Study Design #2



John  
vs **Kylie**



**Kylie**

high dose      low dose

**John**

high dose

**1,1**

**2,0.5**

low dose

**0.5,2**

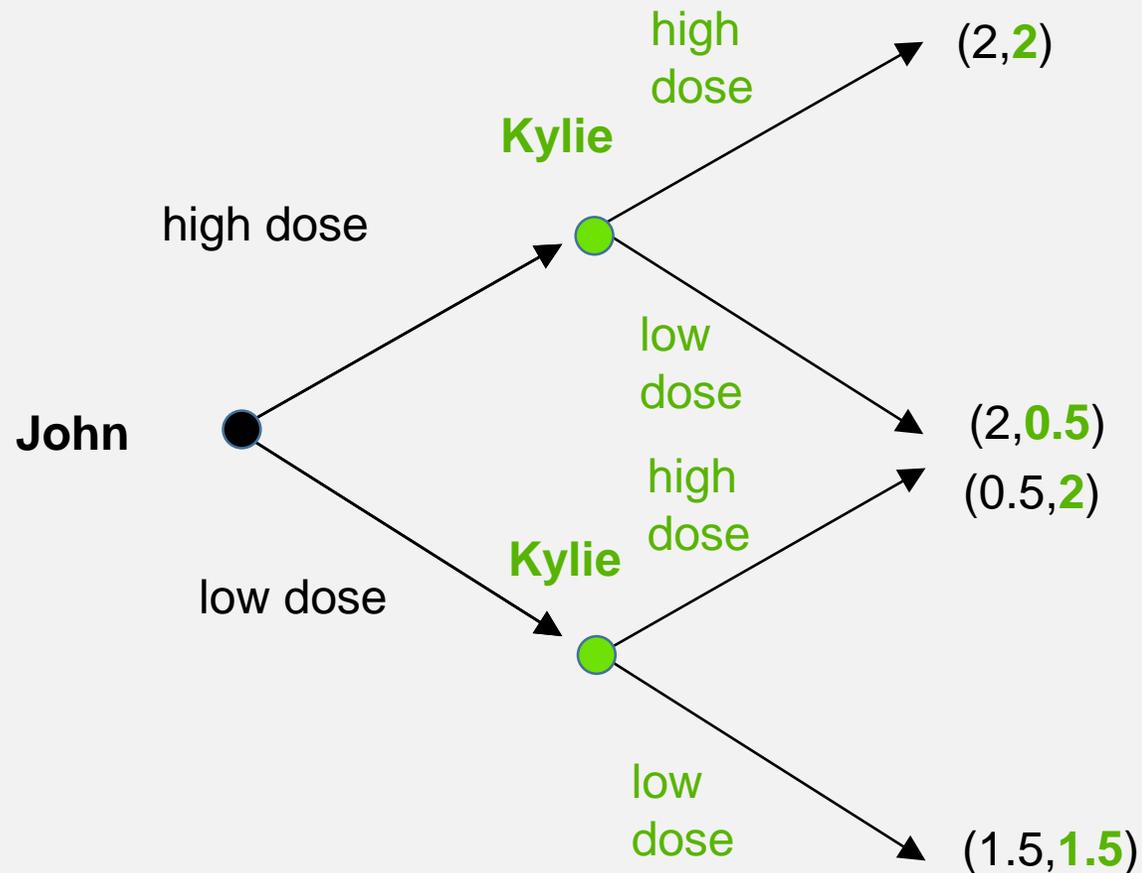
**1.5,1.5**

John's payoffs :

If he decides for ... - **Kylie** decides for....:

- High - **high**: 50% of \$4B-\$1B costs = **1**
- High - **low**: 75% of \$4B-\$1B costs = **2**
- Low - **high**: 25% of \$4B-\$0.5B costs = **0.5**
- Low - **low**: 50% of \$4B-\$0.5B costs = **1.5**

# Case Study: John and the Phase III Study Design #3



John  
vs **Kylie**



What if Kylie is informed  
about John's decision?

Solving the game:

**Look ahead and reason back**

# Multiple Equivalent Simultaneous Offers (MESO)

- Useful in collecting information from the partner
- Be creative and provide multiple options that have the same value
- This signals cooperation



- Use MESOs if the counterparty ..
- is not willing to share information
  - does not reveal priorities

# Negotiations: Never bid round numbers

- “Precise” bids yield better outcomes.
- Don’t bid with a round number like USD 50M rather bid with a more precise number, like USD 47,50M.
- Precise bids: people tend to assume, true or not, that someone must have crunched lots of data to come up with an amount so specific.
- A round number, on the other hand, suggests that a person is just ballparking it.



# Group Negotiations

## In-Class Exercise: Diamond Pharmaceuticals Wants to Buy Safire Biotech

- You will have **25 minutes** to agree on the following:
  - **Location** of the HQ, either San Francisco or Guangzhou
  - **Price** that Diamond (Market Cap: USD 40B) is going to pay for Safire (Market Cap: USD 26B)
- Two persons will represent **Diamond**
  - One person has to negotiate San Francisco as HQ
  - One person has to negotiate the best price
- Two persons will represent **Safire**
  - One person has to negotiate Guangzhou as HQ
  - One person has to negotiate the best price



Use game theory to **influence your partner's choice**



- “**STRATEGIC MOVE**”: tactic of trying to credibly change the other players’ beliefs about your behavior in order to **change the game to your advantage**
- Tactics include **commitments, threats and promises**
- Changes the game you are playing **by adding a stage/changing the payoffs**

# Strategic Behavior & *Influencing*



Ben Stiller &  
Emma Thompson in

**THE  
MEYEROWITZ  
STORIES**  
(New and Selected)

# Course Facilitators: Stefanie Schubert & Harm-Jan Borgeld

## ■ Professor **Stefanie Schubert**, PhD CA-AM

- **Professor of Economics** at SRH University Heidelberg. Expertise: strategic decision making, managerial economics, strategic alliances/networks. Consultant for strategic management
- Previous position: Assistant Professor of Organization Theory and Management at WHU (Vallendar/Düsseldorf)

We are looking forward  
to seeing you in



## ■ **Harm-Jan Borgeld**, PhD MBA CSAP

- **Head of Alliance Management** at Merck KGaA. Responsible for the Commercial, Development, Research, and selected Regional Alliances.
- Received his MBA: RSM, NL/Haas Business School, USA; Ph.D: Faculty of Medicine, University of Nagoya, JP