

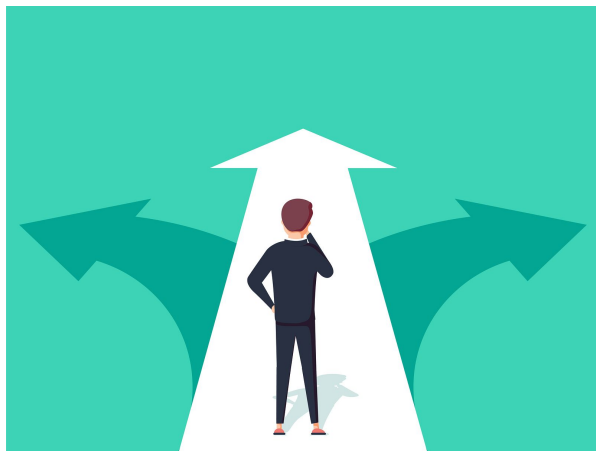
# Introduction of Game Theory



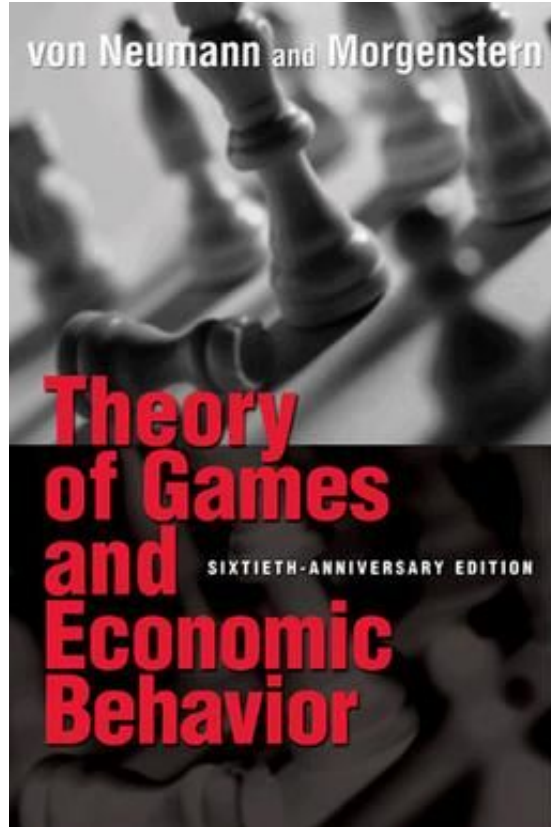
Infinity Room presentation by Suzu Naito

KNOWLEDGE HINT WAY SUCCESS  
ALTERNATIVE CHOOSE DIRECTION  
RIGHT ANSWER  
RESEARCH SOLVE  
MESSAGE HELP  
CHALLENGE  
CONFUSED  
QUESTION DIFFICULT  
RISK BUSINESS  
CHOICE  
CONFESSION  
PERSPECTIVE SOLUTION  
CONCEPTUAL FUTURE  
WARNING LEARNING IDEA STRATEGY OPTIONS  
SITUATIONS ASSUMPTION  
DIFFERENT ACTION  
FRUSTRATE

# DECISION MAKING



# Theory of games and economic behavior (1944)



Oskar Morgenstern  
(Economist)



John von Neumann  
(Mathematician)





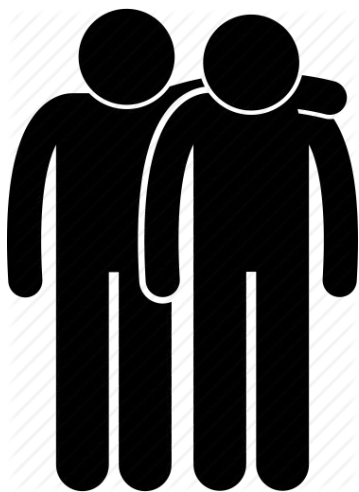
Players



Strategic Situation



You



Friend A



**Admitting**= **3 years** in the prison

**Remain silent**= **1 year** in the prison

If you **admit** and friend A **remained silent**= you are **released**, friend A  
imprison **5 years**

If friend A **admits** and you **remained silent**= Friend A **released**, you are  
imprison **5 years**

### Friend A options

	Remain silent	Admit
Remain silent	$-1, -1$	$-5, 0$
Admit	$0, -5$	$-3, -3$

Your  
Options



**What is the best solution for the friend A?**

### Friend A options

	Remain silent	Admit
Remain silent	$-1, -1$	$-5, 0$
Admit	$0, -5$	$-3, -3$

Your  
Options



Players are logical= They act to pursue their benefits

Finding a **best** solution = All benefits or lose on a limited amount

# Application of Game Theory

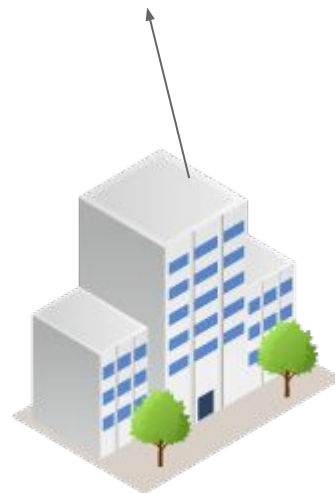
## No plea deal case



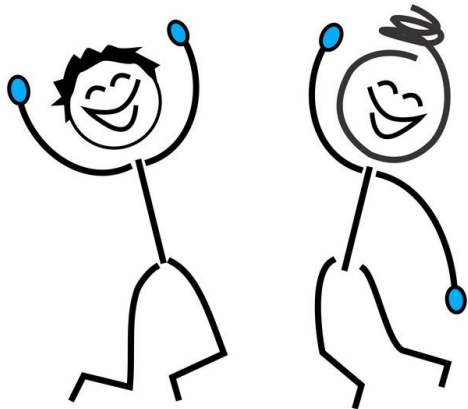
Your  
Options

Friend A options

	Friend A options	
	Silent	Admit
Silent	-1,-1	-5,-5
Admit	-5,-5	-5,-5



**Cooperation is the key!**



**Thank you!**



TEDEd Video: The Infinite Prisoner's dilemma

