On Game Shows and Nuclear Talks

Zurich, 25.01.17
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This slide deck is a short version of a presentation given on the occasion of the CIPS Event “Game Theory for Enhanced Negotiations”
Chair of Negotiation and Conflict Management
What is Game Theory?

Game theory is the mathematical theory of interactive decision-making: it models conflict and cooperation between rational decision-makers.

Applications in
- Board Games
- Business
- Politics
- Evolution
- ...
An Example

<table>
<thead>
<tr>
<th></th>
<th>Nick</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Split</td>
<td>500, 500</td>
<td>0, 1’000</td>
</tr>
<tr>
<td>Steal</td>
<td>1’000, 0</td>
<td>0, 0</td>
</tr>
</tbody>
</table>

**Not stable:** Abraham has an incentive to switch

**Stable:** Neither Nick nor Abraham have an incentive to switch

**NASH Equilibria**
What would you do?

https://www.youtube.com/watch?v=S0qjK3TWZE8
Another Example

Long-lasting deadlock

P5+1

Iran

It is gratefully acknowledged that the following slides could be based on a slide deck by M. Ambühl and T. Langenegger.
Both inflexible  

No negotiation  
“lose-lose” situation
No negotiation

More centrifuges
(200 -> 20'000)

More sanctions
(4 -> 80)
External factors changed the game
### Regional Power: Understanding desirable

- **Effect of sanctions**

### Involvement of Iran useful
- **Concerns about nuclear program**

### Payoffs
- **Payoff USA**
- **Payoff Iran**

### Games
- **flexible**
  - stable Nash
  - inflexible
- **inflexible**

Images: Wikimedia (CC BY)
Joint Comprehensive Plan of Action
Vienna, 14 July 2015

Photo: U.S. Mission Geneva (CC BY-ND)
Thank you!