

# A Game Theory Path To Quantitative Literacy

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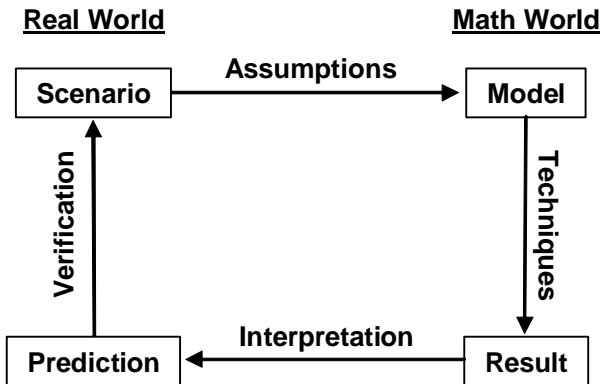
Valparaiso University & Goshen College

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# Who Are We? Why Are We Here?

- Rick Gillman is at Valparaiso University
  - 4000 students
  - Northwest Indiana
  - Primarily undergraduate
  - 15 person mathematics and computer science department
- David Housman is at Goshen College
  - 900 students
  - Northcentral Indiana
  - Primarily undergraduate
  - 3 person mathematics and computer science department

# Mathematical Modeling



# Models of Conflict and Cooperation

- 1 Deterministic Games
- 2 Player Preferences
- 3 Strategic Games
- 4 Probabilistic Strategies
- 5 Strategic Game Cooperation
- 6 Negotiation and Arbitration
- 7 Coalition Games
- 8 Fair Division

# Climate Change in Quantitative Literacy Courses

- Policy comparison games (cap and trade versus carbon tax)
- Experimental games with a different goal
- Treaty negotiation games