

# Main Points of: Imagining and Imaging: Creating a New Model World

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# Outline

1. Languages of Modeling
2. Visualization
3. Newness
4. The History of the Edgeworth Box

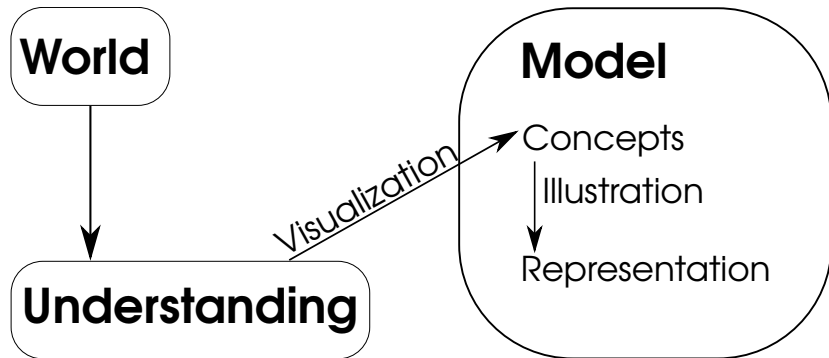
# Conceptual versus Perceptual Space

<b>Perceptual Space</b>	<b>Conceptual Space</b>
Artist	Economist
Illustrates	Visualizes
Understanding the Perceptual Space	Concepts and Manipulation

# Modeling and the Use of Mathematics

- Mathematical Languages:
  - Use of symbols
  - Manipulation of symbols
  - Rules for the manipulation of symbols given by the language and the model
- Sentences Math and Diagrams
  - Math is closer to sentences than to diagrams
  - Math and sentences express ideas in temporal or logical relations
  - Diagrams express ideas in spatial relations

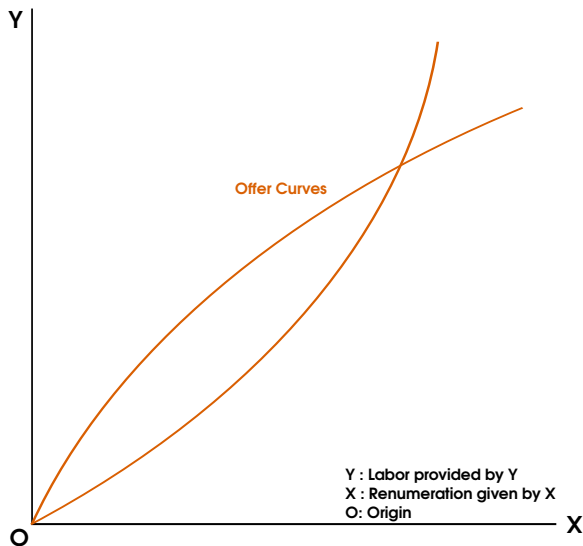
# The Process of Visualization



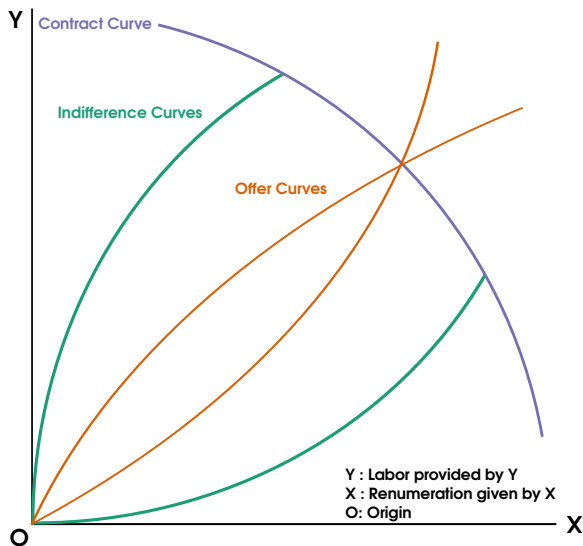
# Imagining new Concepts

- New World with new Concepts
- Modeling leads to other statements about the World than verbal economics
- Expressing Models in verbal form needs new words for new concepts
- The model becomes essential to the text

# Marshall's first Trade Diagram (1879)

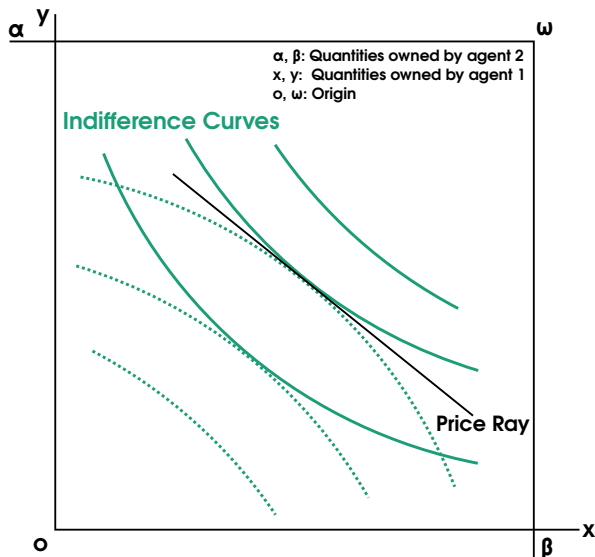


# The Original Edgeworth Box (1881)





# Pareto's "Optimum" Box Diagram (1906)



# Newness and the Edgeworth Box

- Marshall's first trade diagram (1879)
  - Offer curves
- The original Edgeworth box (1881)
  - Indifference curves
  - Contract curve
- Pareto's "optimum" box diagram (1906)
  - Pareto optimality