



The Brookings Institution

**Center on Social and
Economic Dynamics**

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The Brookings Institution

- Brookings is an Independent Social Science and Public Policy Research Institution, founded, 1927.
- **Mission: To conduct high-quality, independent research and, based on that research, to provide innovative, practical recommendations**

Brookings Programs

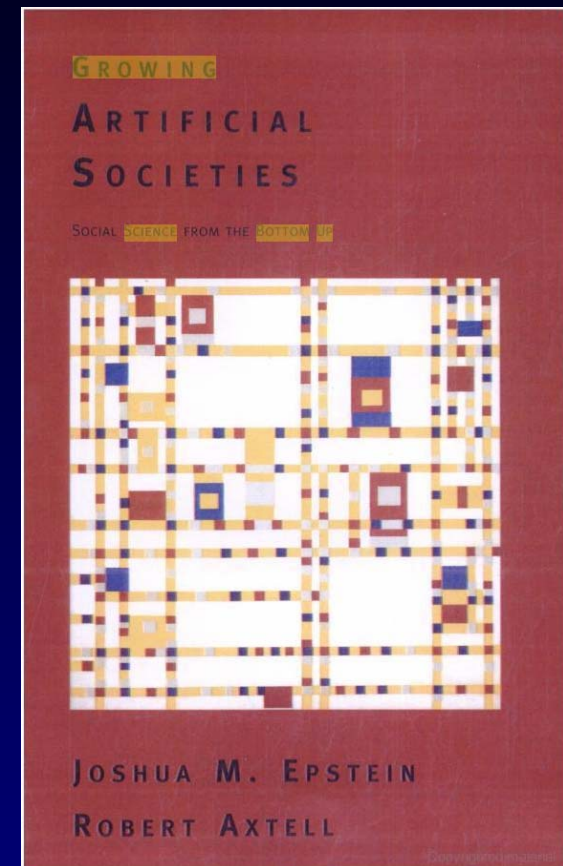
- Economic Studies
- Foreign Policy
- Global Economy and Development
- Governance Studies
- Metropolitan Policy

Our Center

- Center on Social and Economic Dynamics (CSED)
- People and behavior are critical
- Pioneered Agent Based Modeling

Agent Based Modeling

- Agents – Simulated people
- Heterogeneous
 - Age
 - Wealth
 - Knowledge
 - Friends
 - Behaviors



Past Work

Prisoner's Dilemma

- Simple Game
- Obvious Answer
- Society?

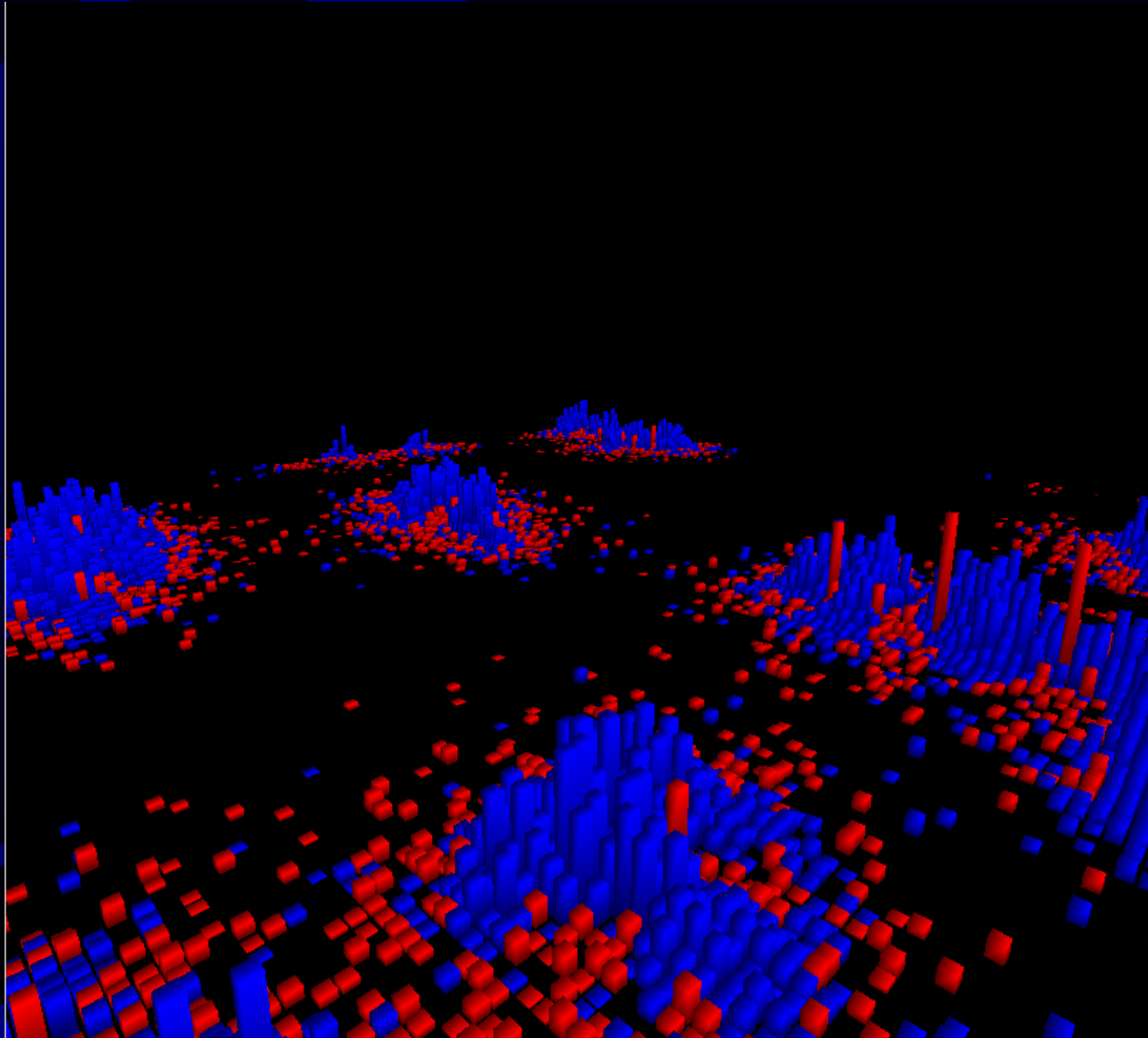
Canonical PD payoff matrix

	Cooperate	Defect
Cooperate	3, 3	0, 5
Defect	5, 0	1, 1

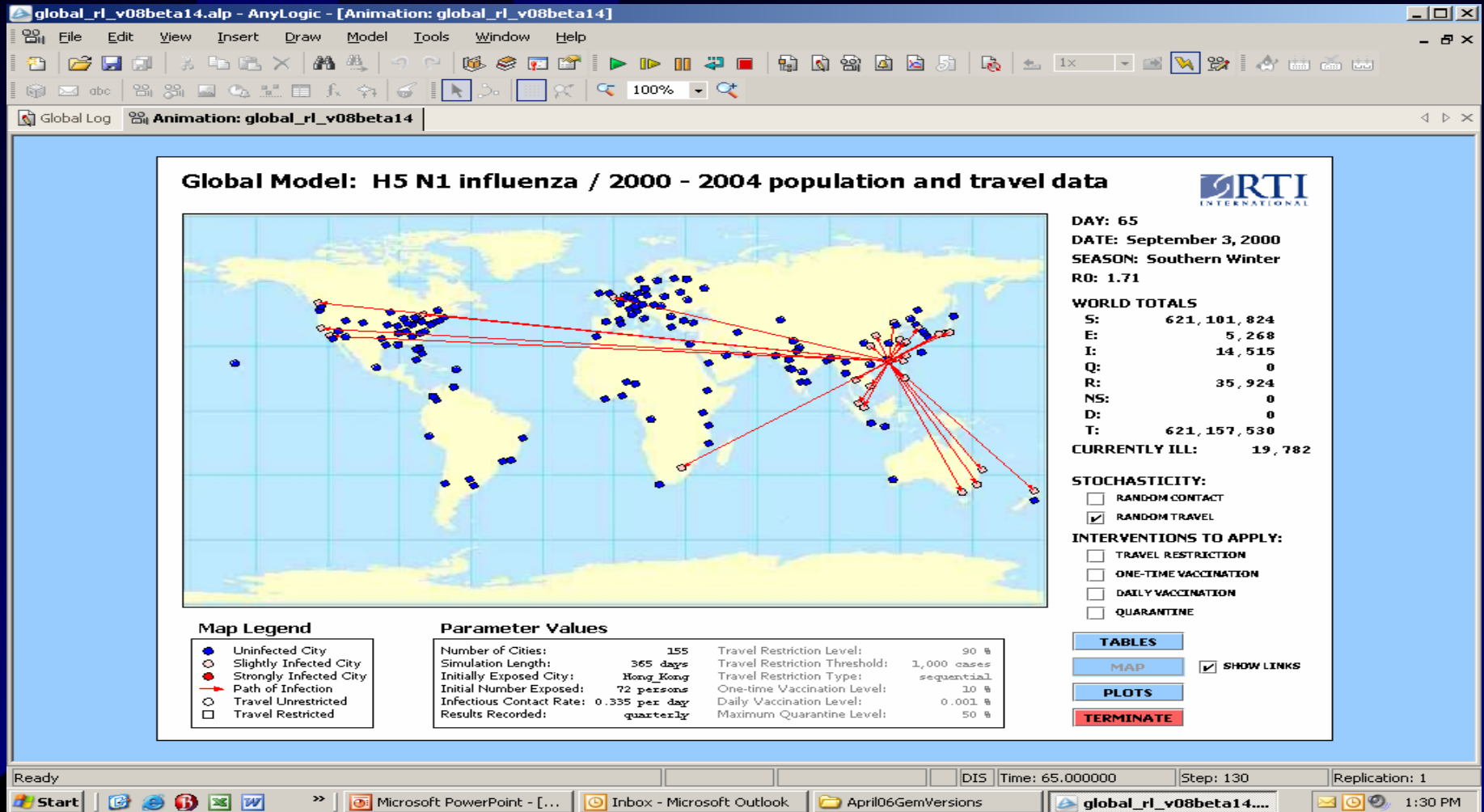
In "win-lose" terminology the table looks like this:

	Cooperate	Defect
Cooperate	win-win	lose much-win much
Defect	win much-lose much	lose-lose

Prisoner's Dilemma (cont.)

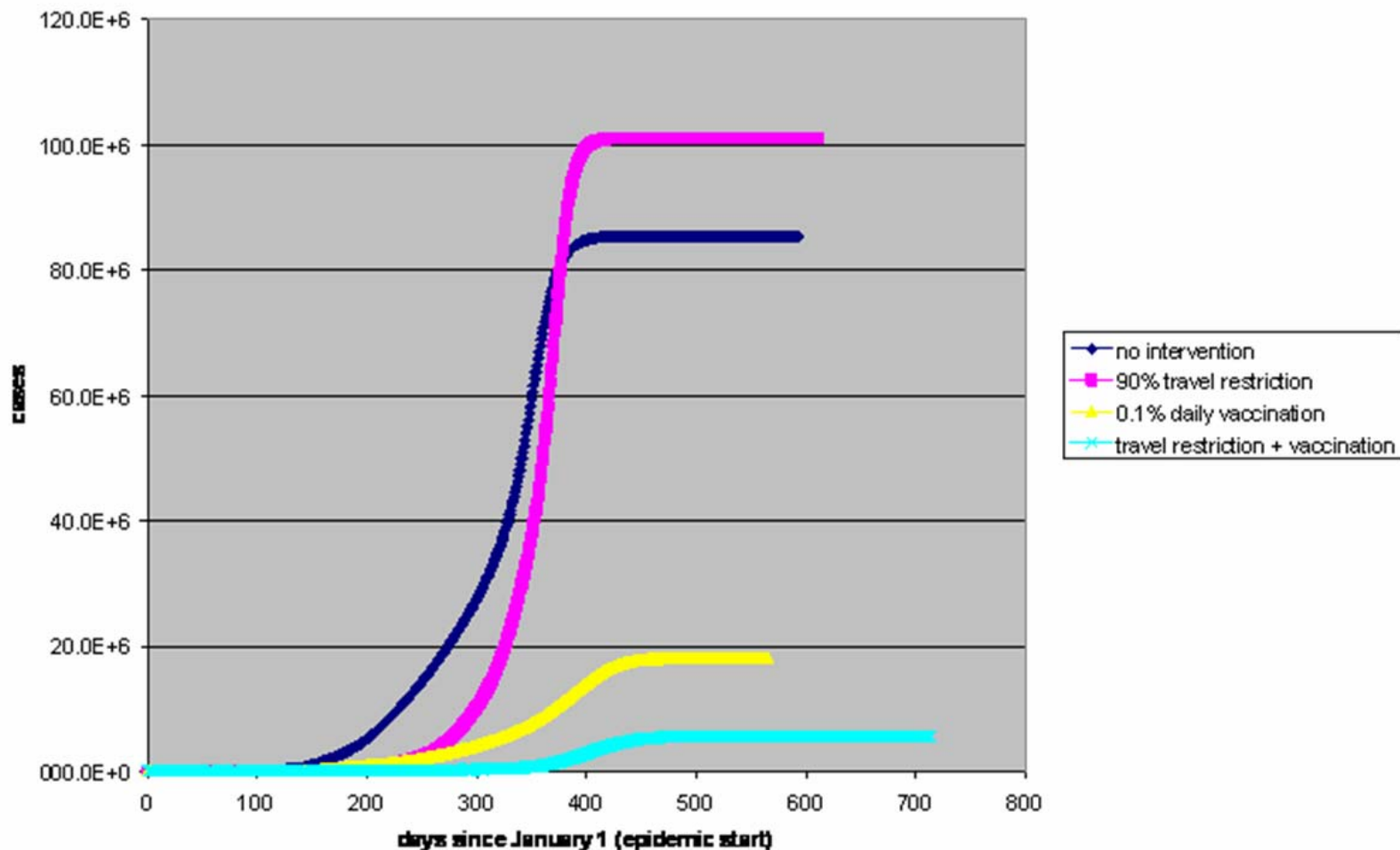


Recent Work Pandemic Flu



Pandemic Flu (cont)

U.S. Daily Total Infected - Hong Kong, January 1 start



Current Work

- Coupled Contagion
- Epidemic Dynamics
- Obesity
- Civil Violence