GEQ1000

Economics

(Social Science)

2.4
Applying the Model

Applying the Model

Use the model to understand real world situations

Applying the Prisoner's Dilemma?

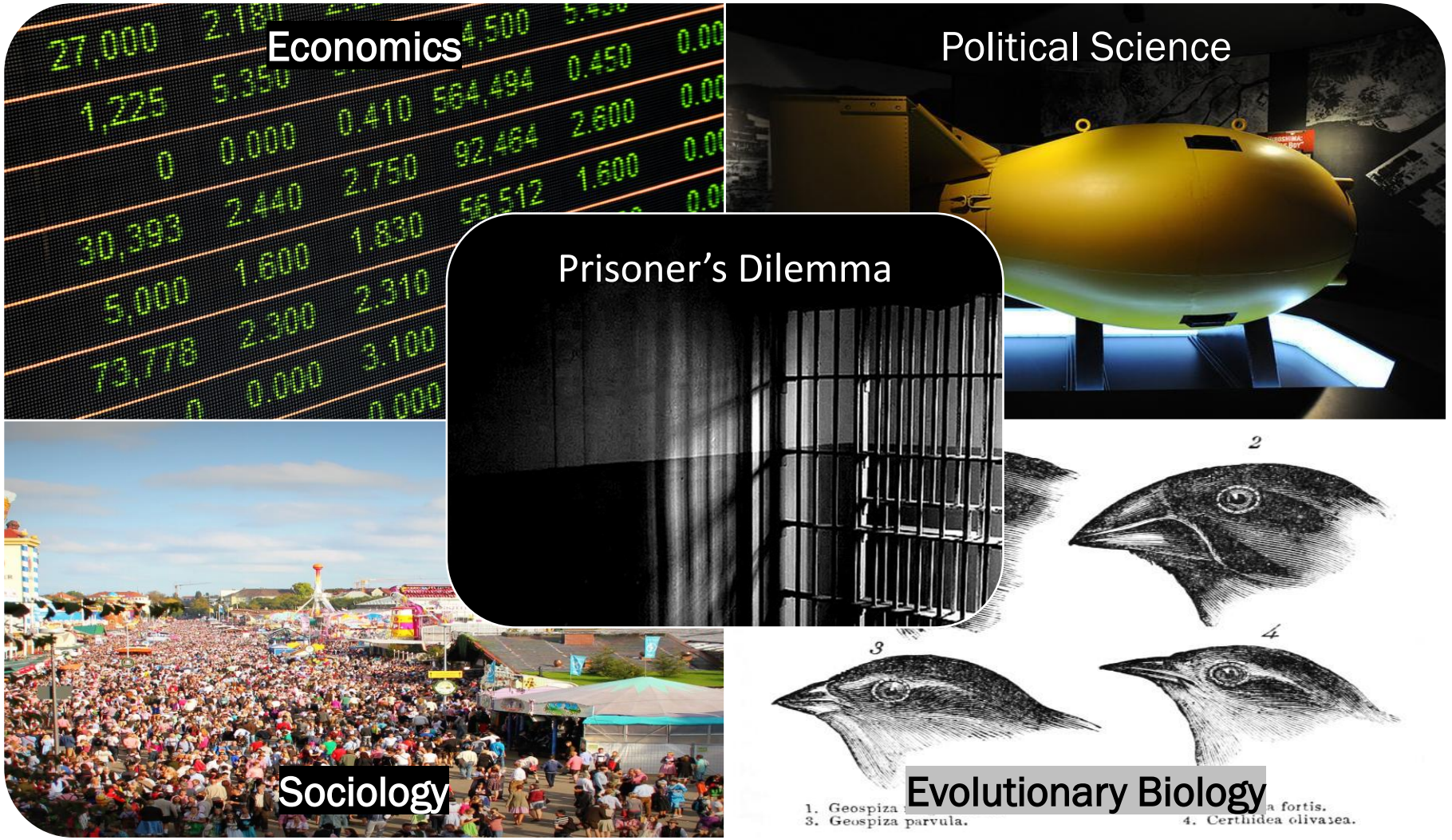

Photo by Adam Harman

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Waiting in line

Prisoner's Dilemma: Waiting in line

If everyone arrives just one hour before the store opens…

Chance of getting the phone stays roughly the same

Less time wasted in queue

Prisoner's Dilemma: Waiting in line

If everyone *else* arrives just one hour before the store opens

...and *you* arrive two hours ahead, you increase your chances!

Prisoner's Dilemma: Waiting in line

So...

...everyone arrives ten hours ahead!

Prisoner's Dilemma: Waiting in line

		Player 2: Cooperate	Player 2: Defect
Player 1	Cooperate	4 , 4	0 , 6
	Defect	6 , 0	2 , 2

Prisoner's Dilemma: Waiting in line

		Player 2: Cooperate	Player 2: Defect
Player 1	Cooperate	4 , 4	0 , 6
	Defect	6 , 0	2 , 2

All arriving one hour ahead
= (Cooperate, Cooperate)

Prisoner's Dilemma: Waiting in line

		Player 2: Cooperate	Player 2: Defect
Player 1	Cooperate	4 , 4	0 , 6
Player 1	Defect	6 , 0	2 , 2

All arriving ten hours ahead = (Defect, Defect)

Doping in Sports

They should have confessed, but...

La Mafia non esiste.

La Mafia

Prisoners' Dilemma Lab Experiments

In Prisoners' dilemma lab experiments, *people tend to cooperate around half the time*

Reject the Model?

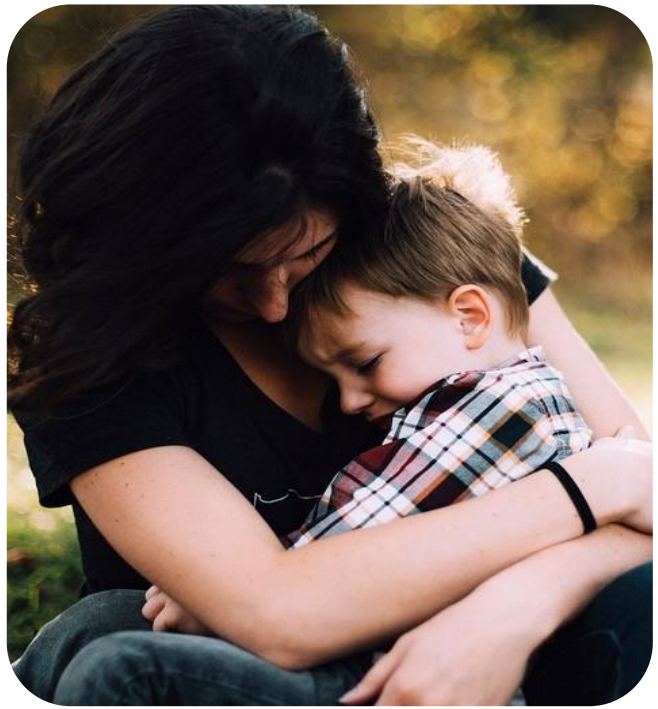
Not necessarily

There is no model that will predict perfectly in the Social Sciences

Other factors may be more powerful at times

Failure of the model to predict can be instructive

Breaking the Prisoners' Dilemma



Culture

Morality

Biology

But these factors only take us so far...

Even if cooperation is observed, we should be aware that it is *fragile*.

We need to use *laws, rules, and monitoring* to change the payoffs

Image via www.visitcampnou.com

A Good Model is ...

A Good Model is ...

Simple

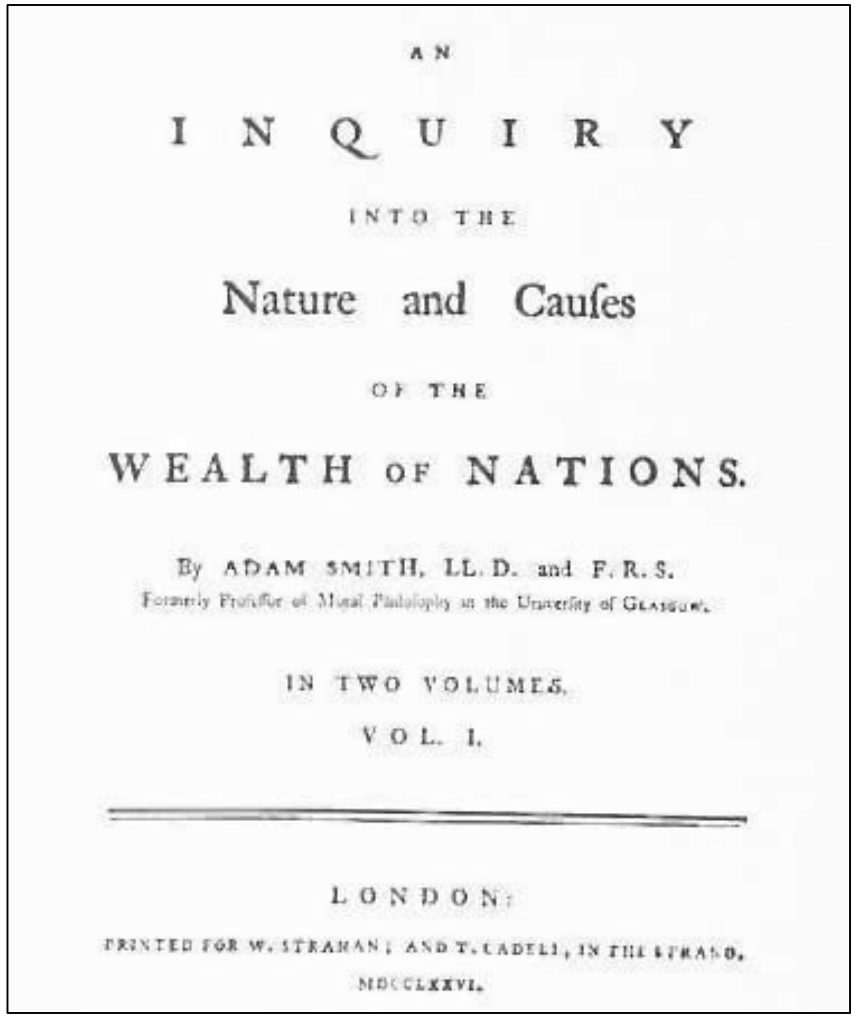
Simple

		Player 2: Cooperate	Player 2: Defect
Player 1	Cooperate	4 , 4	0 , 6
	Defect	6 , 0	2 , 2

A Good Model is …

Simple

Insightful



AN

INQUIRY

INTO THE

Nature and Causes

OF THE

WEALTH OF NATIONS.

By ADAM SMITH, LL.D. and F.R.S.

Formerly Professor of Moral Philosophy in the University of Glasgow.

IN TWO VOLUMES.

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MDCCLXXVI.

VS

		Player 2	
		Don't Confess	Confess
Prisoner 1	Don't Confess	-6 , -6	-10 , -3
	Confess	-3 , -10	-8 , -8

A Good Model is …

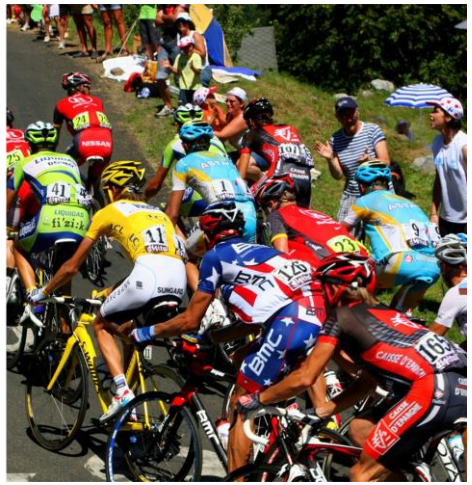
Simple

Insightful

Highly applicable

Highly Applicable

		Player 2: Don't Confess	Player 2: Confess
Prisoner 1	Don't Confess	-6 , -6	-10 , -3
	Confess	-3 , -10	-8 , -8




Next up:
Multiple Models