

SOCIAL INTERACTIONS & ECONOMIC OUTCOMES

MPA 612: Economy, Society, and Public Policy

January 16, 2019

**Fill out your reading report
on Learning Suite**

PLAN FOR TODAY

Measuring stuff correctly
(wrap up)

Individuals and society

Game theory

Stags, hares, and prisoners

MEASURING STUFF CORRECTLY

Excel time again!

INFLATION TARGETS

“Good” inflation = 2–3%

My dollar today buys more than my dollar tomorrow

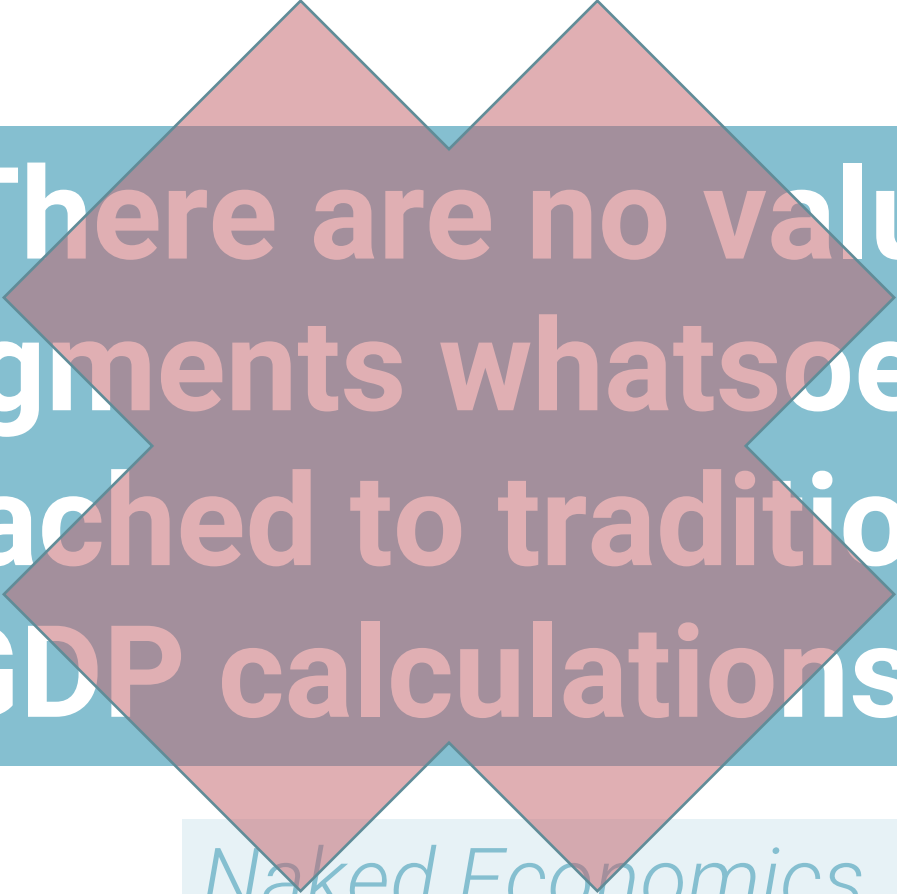
Encourages spending

Deflation = really bad

My dollar today buys less than my dollar tomorrow

Encourages saving; discourages spending

**Does GDP measure
human wellbeing?**



**“There are no value
judgments whatsoever
attached to traditional
GDP calculations”**

Naked Economics, p. 198

“Yet the Gross National Product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry, of the strength of our marriages, the intelligence of our public debate or the integrity of our public officials”

Robert F. Kennedy

Human Development Report 2016

Human Development for Everyone



Human Development Index (HDI)

DIMENSIONS

Long and healthy life

Knowledge

A decent standard of living

INDICATORS

Life expectancy at birth

Expected years
of schooling

Mean years
of schooling

GNI per capita (PPP \$)

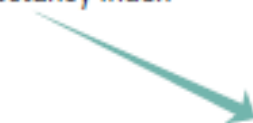
DIMENSION INDEX

Life expectancy index

Education index

GNI index

Human Development Index (HDI)

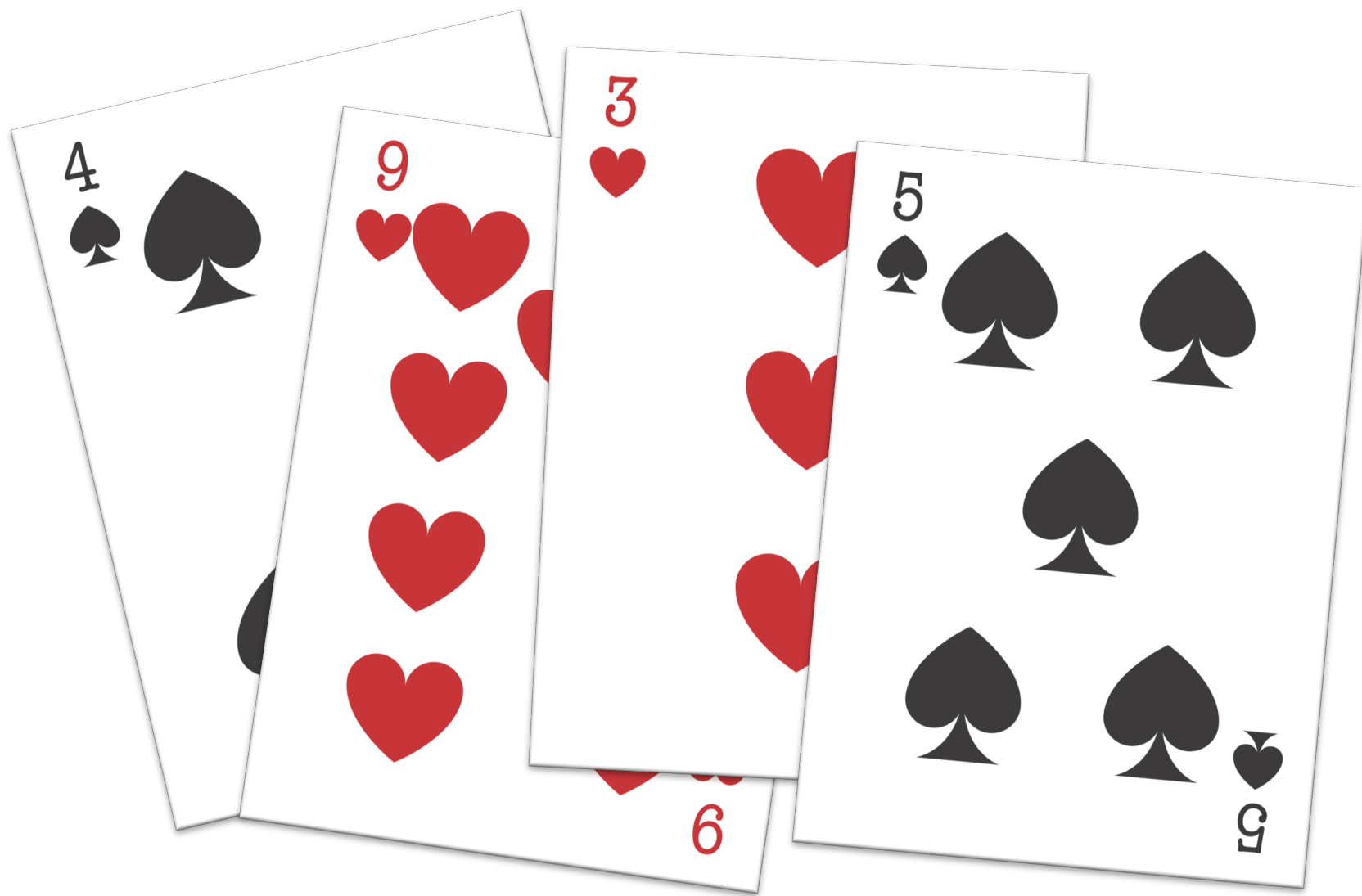


BEST ALTERNATIVE?

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**GDP/capita is standard and
probably will be for a looong time**

INDIVIDUALS AND SOCIETY



PUBLIC GOODS

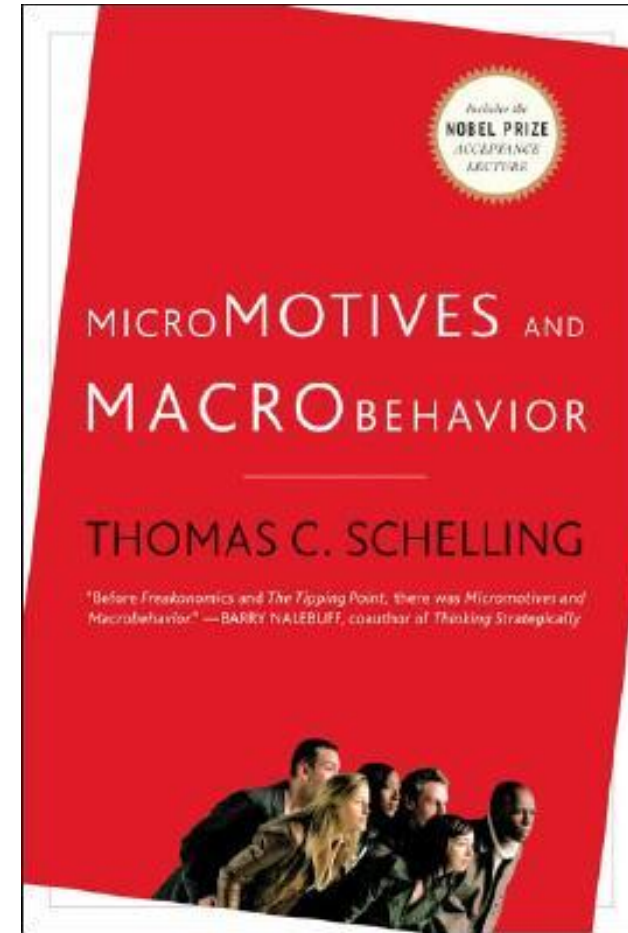
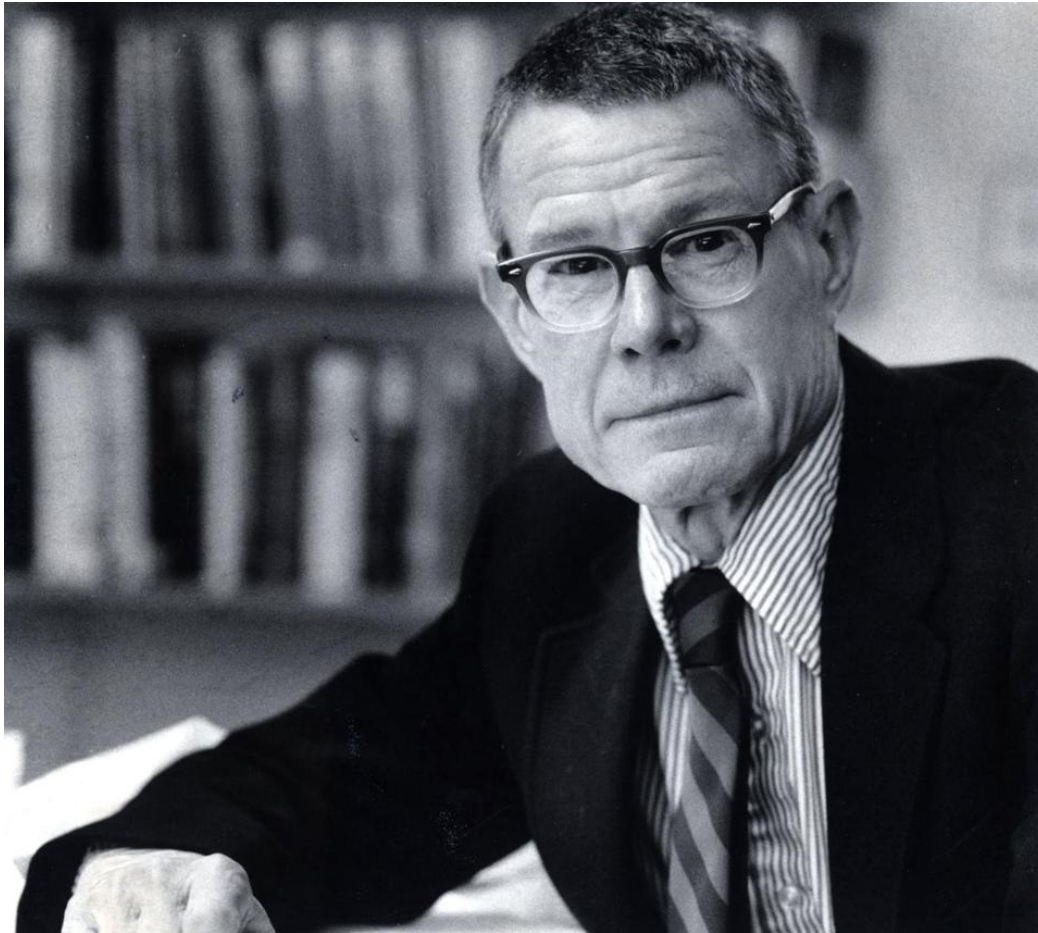
Non-excludable

Not possible to stop others from using the good

Non-rivalrous

One person using the good doesn't prevent anyone else from using it

MICROMOTIVES & MACROBEHAVIOR



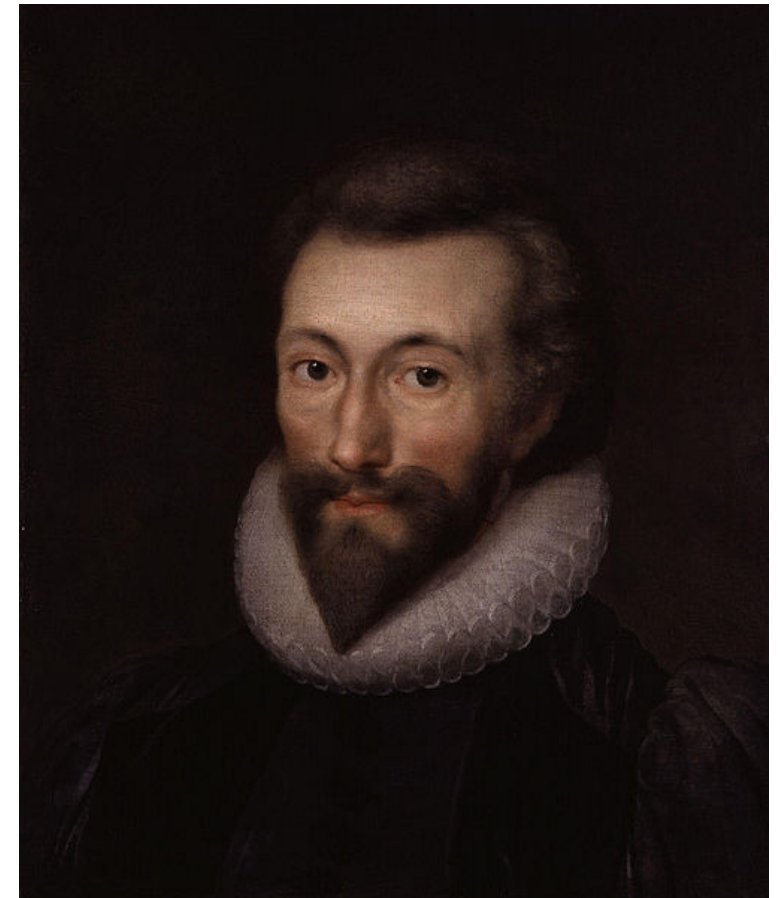
MICROMOTIVES & MACROBEHAVIOR

**Perfectly rational
individual behavior can
create irrational and
inferior social outcomes**

Social dilemma

Collective action problem

No man is an island,
entire of itself;
every man is a piece of the continent,
a part of the main.
If a clod be washed away by the sea,
Europe is the less,
as well as if a promontory were.
as well as if a manor of thy friend's
or of thine own were.
Any man's death diminishes me,
because I am involved in mankind;
and therefore never send to know for
whom the bell tolls;
it tolls for thee.



John Donne
Meditation XVII
Devotions upon Emergent Occasions
1623

GAME THEORY

WHY DO THESE UN-FUN GAMES?

“Economics is the study of how people interact with each other... in providing for their livelihoods”

**We need formal language +
an analytical framework
for looking at those interactions**

KEY VOCABULARY

Game

Model of strategic interaction

Zero-sum

Only one winner

Non-zero-sum

Both players can win;
requires cooperation

Pareto efficiency

Outcome can't be improved
without hurting another player

STRATEGIES

Nash equilibrium

Choice where no player has incentive to change

Dominant

Choice where you gain no matter what the other player does

Pure

Choice you make every time

Mixed

You gain or lose based on probabilities of other player's choices

INVISIBLE HAND

		Bala	
		Rice	Cassava
Anil	Rice	1, 3	2, 2
	Cassava	4, 4	3, 1

Non-zero-sum

One dominant equilibrium

BACH OR STRAVINSKY

		Friend 2	
		Chinese	Italian
Friend 1	Chinese	2, 1	0, 0
	Italian	0, 0	1, 2

Non-zero-sum

Two equilibria

Mixed strategy

CHICKEN

		Racer 2	
		Keep going	Swerve
Racer 1	Keep going	-100, -100	5, -5
	Swerve	-5, 5	0, 0

Non-zero-sum

Two equilibria

Mixed strategy

PRISONER'S DILEMMA

		Bala	
		Magic bugs	Poison
Anil	Magic bugs	3, 3	1, 4
	Poison	4, 1	2, 2

Non-zero-sum

One dominant equilibrium

Not socially optimal!

STAGS, HARES, AND PRISONERS

COOPERATION IN PD LAND

Repetition + iteration

One-shot vs. repeated

Infinitization

Defect at $t - 1$

**PD games underpredict
voluntary cooperation**

People cooperate even though the dominant strategy is always defect