

# A New Approach to Law and Economics

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# Corruption and the Law: the Standard Model

- Suppose someone picks up a loot of  $\$B$
- Let  $p$  be the probability of getting caught
- If caught, she has to pay a fine of  $\$F$
- Then this crime is worth it iff

$$B - pF \geq 0$$

- Hence, this corrupt act will not happen if

$$B \leq pF$$

- Govt. can control corruption by raising  $p$  or  $F$

# Critique of the Standard Model

- If someone commits a crime, when caught she may try to give a bribe
- A bribe transaction is a bilateral transaction. Hence, amenable to Nash bargaining
- Nations may need laws to curb bribery

# Critique of the Standard Model

- India's Prevention of Corruption Act 1988
- My effort to change this law
- A simple sub-game perfect argument
- Recent work:
  - Dufenberg & Spagnolo
  - Abbink, Dasgupta, Gangadharan & Jain
  - Oak
  - Basu, Basu & Cordella

# Traditional View of Law & Economics

- A new law or an amended law changes the game players play

## Prisoner's Dilemma

		Player 2	
		A	B
Player 1	A	7, 7	1, 8
	B	8, 1	2, 2

# Traditional View of Law & Economics

- New law: Anyone doing B will have to pay a fine  $F$

## Altered game

		Player 2	
		A	B
Player 1	A	7, 7	1, 8-F
	B	8-F, 1	2-F, 2-F

Player 2

A

B

A

7, 7

1, 6

Player 1

B

6, 1

0, 0

# The Law as a Focal Point

## Game example

- Choose one number from

3, 7, 9, 100

- If both players choose the same number they get \$1,000 each. Otherwise \$0



# Focal Point


# Focal Point

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# Game of Punctuality

- Punctual: at 8 a.m. sure
- Unpunctual: at 8 a.m. with probability  $p$  ( $<1$ )
- If both punctual, meeting starts on time, and benefit is  $B$
- Individual cost of punctuality is  $C$

# Game of Punctuality

		Other	
		<b>P</b>	<b>U</b>
Self	<b>P</b>	<b>B-C</b>	<i>pB-C</i>
	<b>U</b>	<i>pB</i>	<i>p<sup>2</sup>B</i>

- Assume:

$$B - C > pB \quad (1)$$

$$p^2B > pB - C \quad (2)$$

$$B(1 - p) > C > pB(1 - p) \quad (3)$$

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- **First Corollary:** What can be achieved through the law can, in principle, also be achieved without the law.
- **Second corollary:** If an outcome is not an equilibrium of the economy, then no law can implement it.

# Game of Life

- The two citizens, 1 & 2, & magistrate, 3
- The citizens choose between A & B; the magistrate chooses between  $M_1$  &  $M_2$ .

	A	B
A	7, 7, 0	1, 8, 0
B	8, 1, 0	2, 2, 8

$M_1$

	A	B
A	7, 7, 2	1, 6, 0
B	6, 1, 0	0, 0, 3

$M_2$