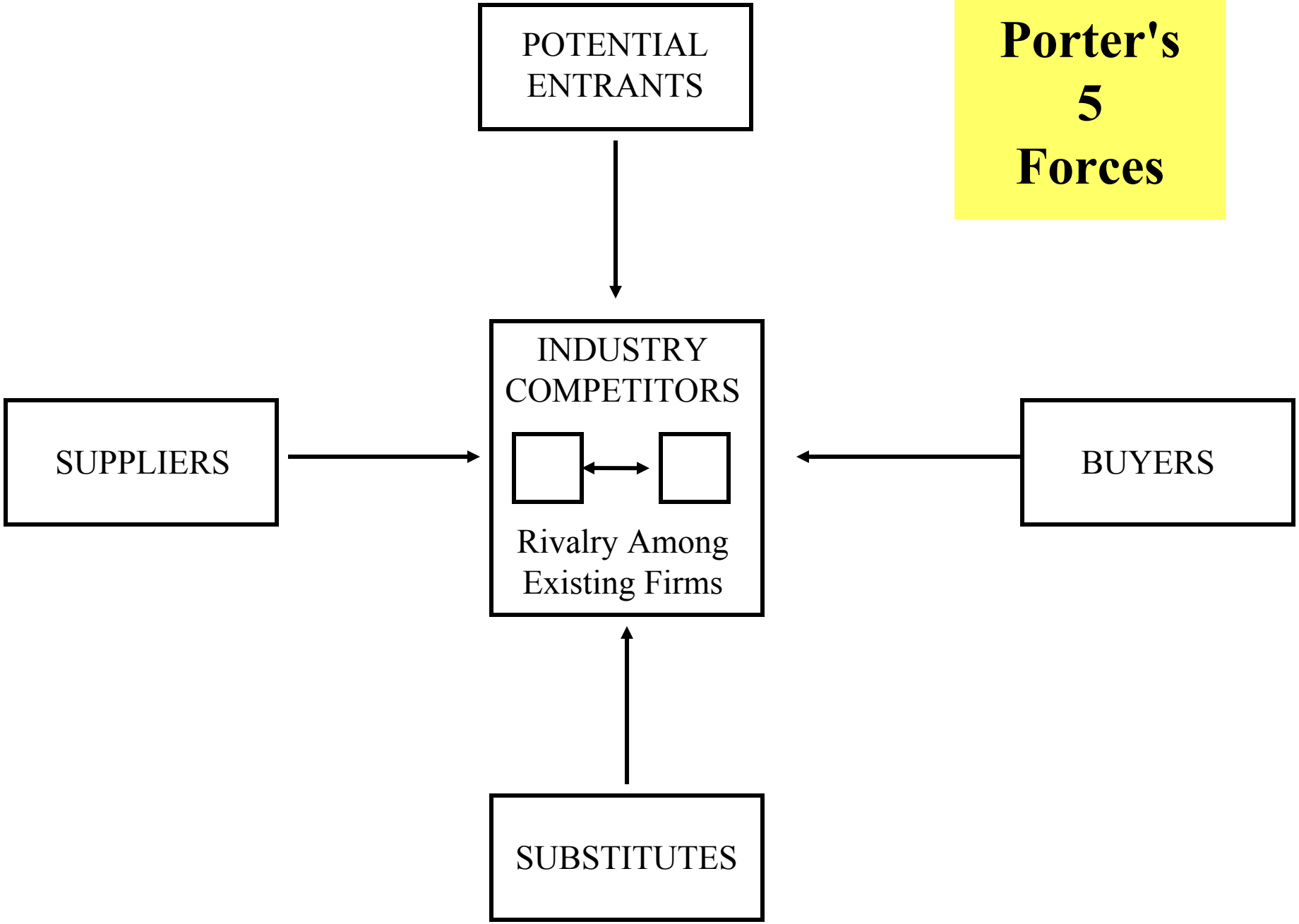
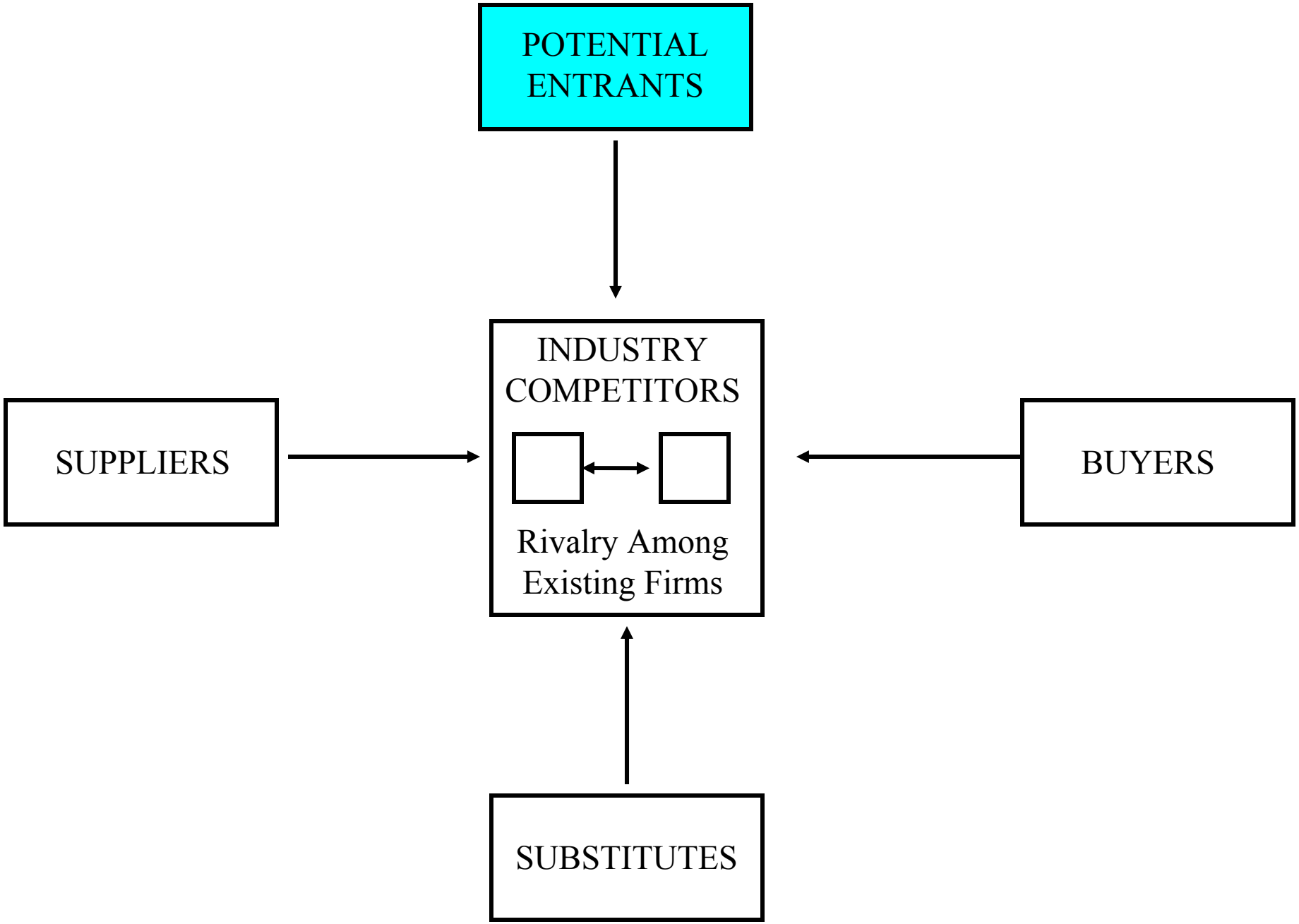
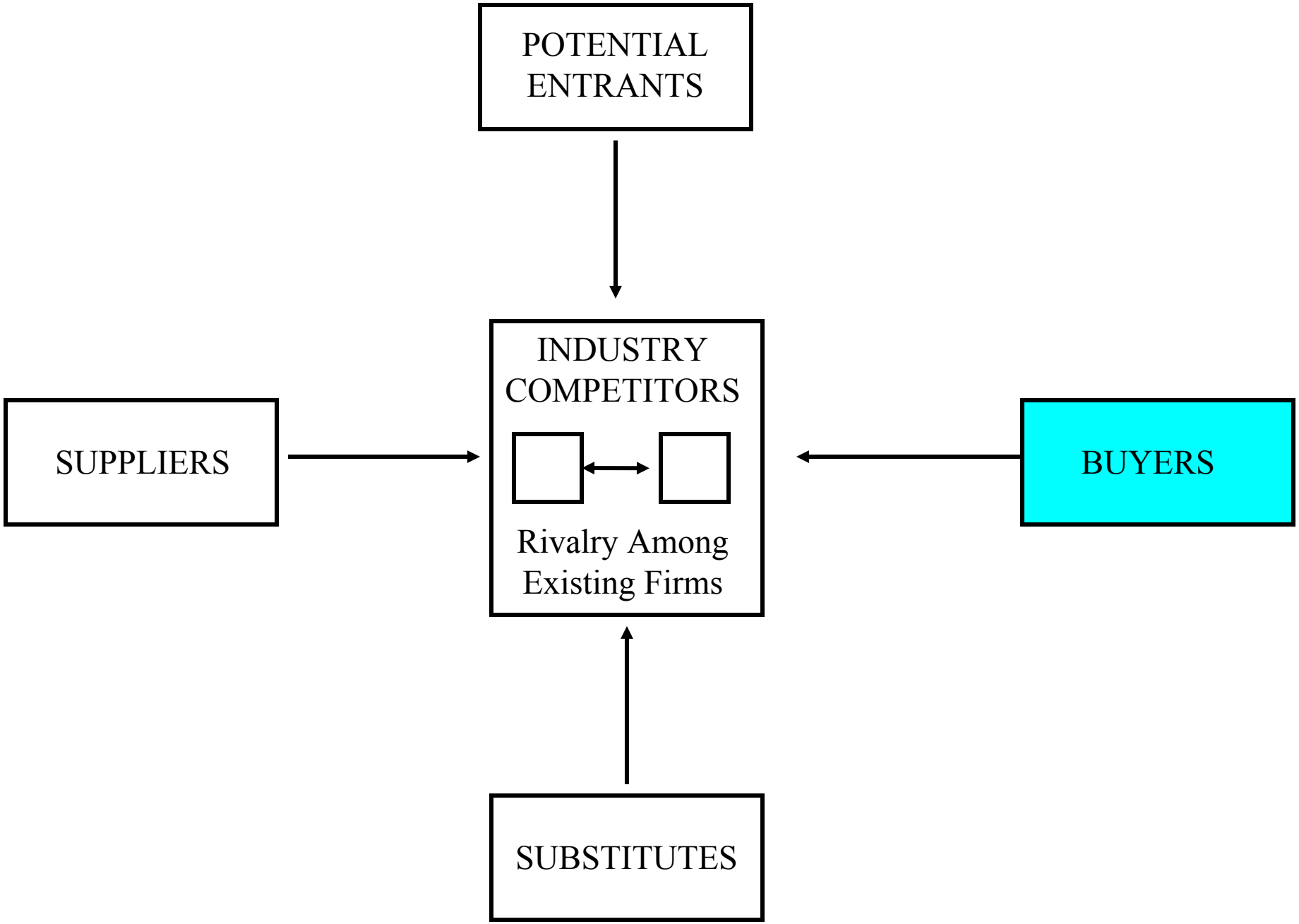
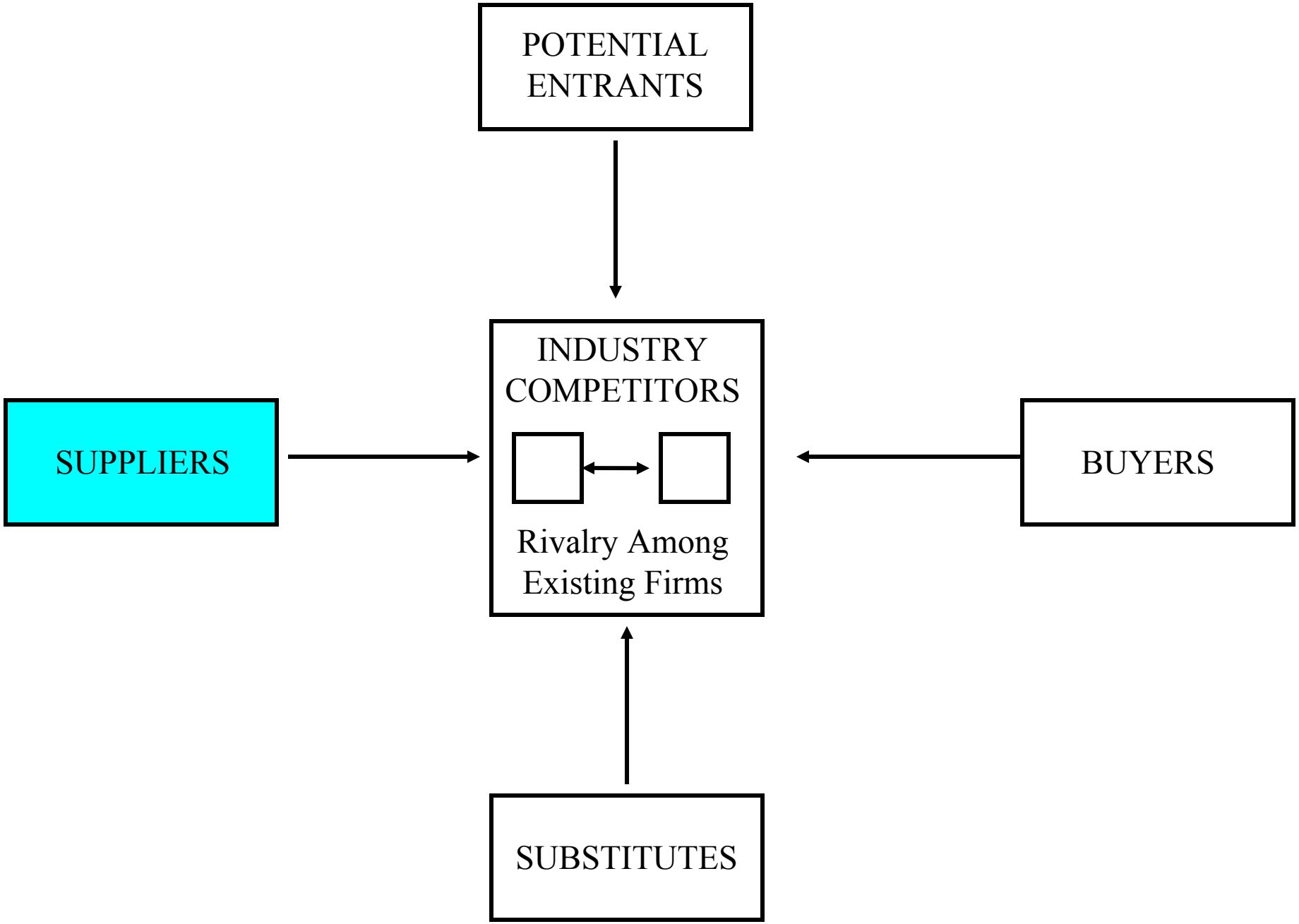
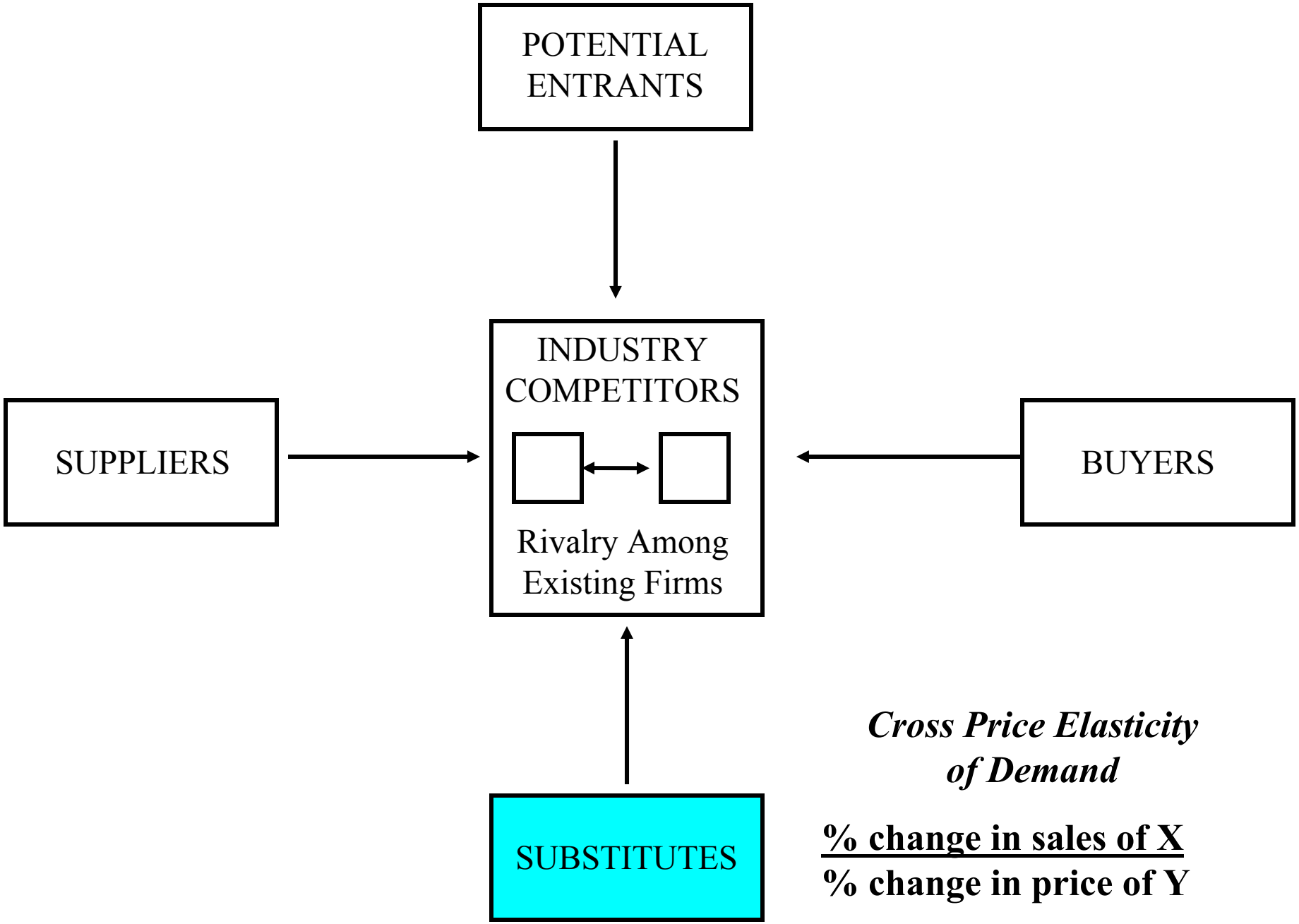
Porter's 5 Forces




POTENTIAL ENTRANTS
INDUSTRY COMPETITORS
Rivalry Among Existing Firms
SUPPLIERS
BUYERS
SUBSTITUTES


POTENTIAL ENTRANTS
INDUSTRY COMPETITORS
Rivalry Among Existing Firms
SUPPLIERS
BUYERS
SUBSTITUTES


POTENTIAL ENTRANTS
INDUSTRY COMPETITORS
Rivalry Among Existing Firms
SUPPLIERS
BUYERS
SUBSTITUTES

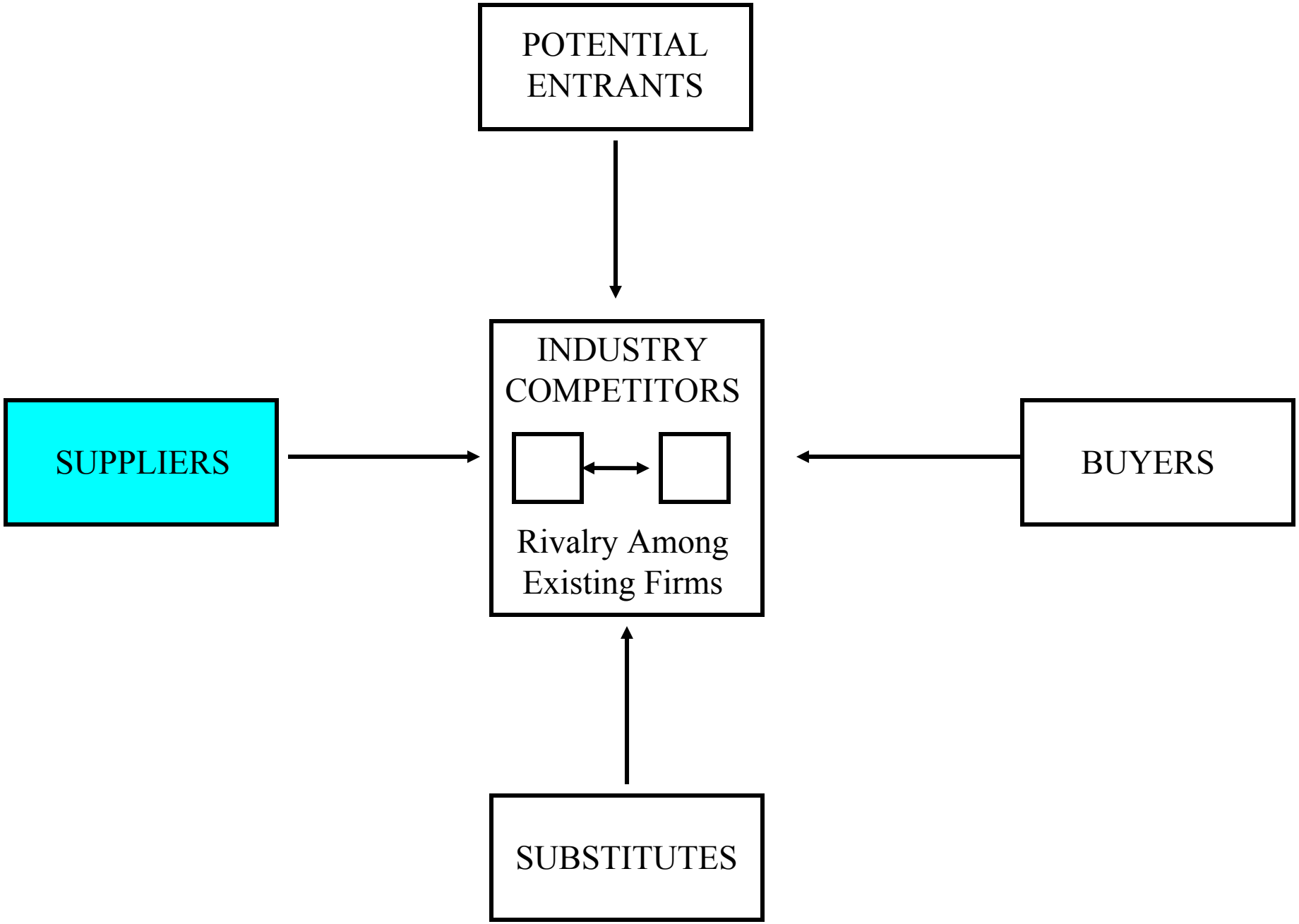


Cross Price Elasticity of Demand

$$\frac{\text{\% change in sales of X}}{\text{\% change in price of Y}}$$

Taking a broad view of competition
(to an extreme!)

- Market share = us / (us + "them")
- Who are "them"? What goods are considered substitutes?
  - "*The average person requires 64 ounces of liquid per day. Worldwide, Coke sells about 2 ounces per person per day. We remain resolutely focused on going after the other 62.*"


POTENTIAL ENTRANTS
INDUSTRY COMPETITORS
Rivalry Among Existing Firms
SUPPLIERS
BUYERS
SUBSTITUTES

Competition

- **What are some dimensions along which firms compete?**
  -
  -
  -
  -
  -
- **What forms of competition are most destructive?**
  -

Where do you get information about competitors?

- **from their customers** (Have you gotten any good offers from other companies?….Really? What kind of deal were they offering?)
- **from their suppliers** (Do you have experience providing this level of demand? "We supplied company X with 18,000 widgets last month alone." Hm, you don't say.)
- **from their employees** (Sooo, you claim to have relevant work experience….what *exactly* were you working on in your previous job?)
- **from their products** ("Even from their trash!")

- Understanding competitors is becoming a big deal!

- Game Theory is being more widely used.

Game Theory

What is a game?

- More than one **player**
- Each player has a set of possible **strategies**.
- The **payoffs** to each depends on the strategies chosen by all players.
- Payoffs represented as a **payoff matrix**.

Payoff Matrix for
Rock/Paper/Scissors

Column

Row		**Scissors**	**Paper**	**Rock**
	Scissors	0, 0	1, -1	-1, 1
	Paper	-1, 1	0, 0	1, -1
	Rock	1, -1	-1, 1	0, 0

Zero sum and variable sum games

- **Zero sum game**: The total payoff to the players is always zero.

- **Variable sum game:** The total payoff depends on the strategies chosen by each.

0 sum or variable sum?

Column

Row	Scissors	Paper	Rock
Scissors	0, 0	1, -1	-1, 1
Paper	-1, 1	0, 0	1, -1
Rock	1, -1	-1, 1	0, 0

Chicken:

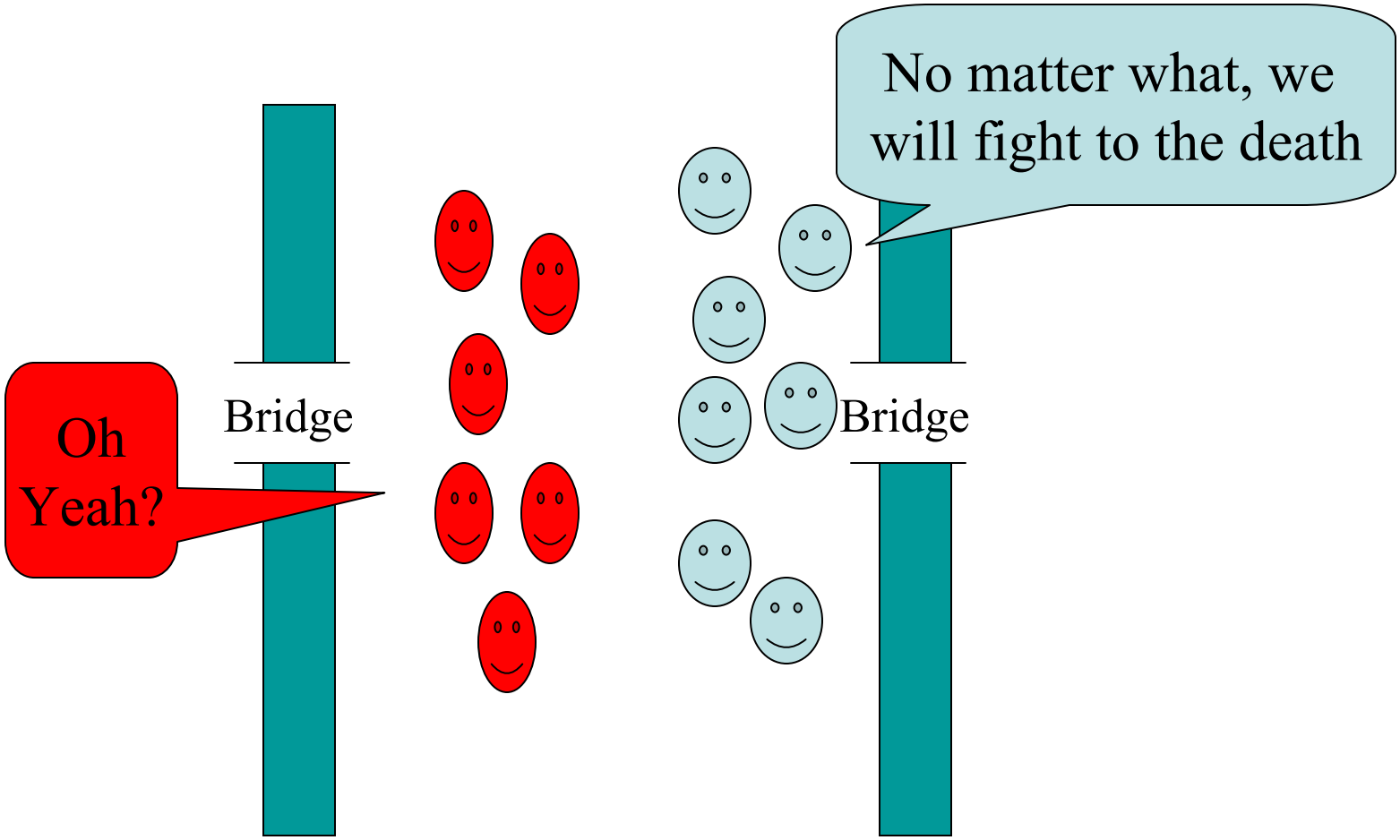
0 sum or variable sum?

		Dennis	
		Swerve	Straight
James	Swerve	-1, -1	-5, 5
	Straight	5, -5	-100, -100

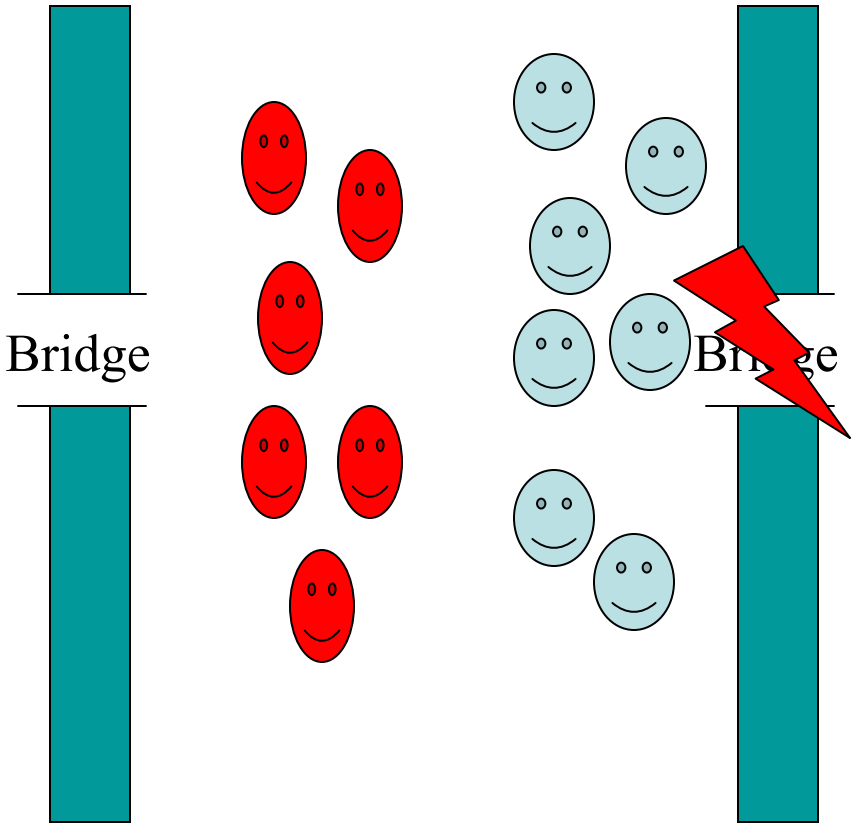
Chicken: The effect of precommitment

		Dennis	
			Straight
James	Swerve		-5, 5
	Straight		-100, -100

Cheap talk


No matter what, we will fight to the death
Oh Yeah?
Bridge
Bridge

A credible threat



Dominance

- One strategy **dominates** another if its payoff is always at least as high as the payoff from another strategy, regardless of what the other player does.

❖ (Dominance reasoning usually coupled with a **rationality assumption**: Assume that the other player is rational. Assume that the other player knows that you are rational. Assume that the other player knows that you know that they are rational, and so on.)

The Prisoner's Dilemma:

		Mary	
		Not confess	Confess
Mike	Not confess	-2, -2	-10, 0
	Confess	0, -10	-8, -8

Does Mike have a dominant strategy?

		Mary	
		Not confess	Confess
Mike	Not confess	-2, -2	-10, 0
	Confess	0, -10	-8, -8

Does Mary have a dominant strategy?

		Mary	
		Not confess	Confess
Mike	Not confess	-2, -2	-10, 0
	Confess	0, -10	-8, -8

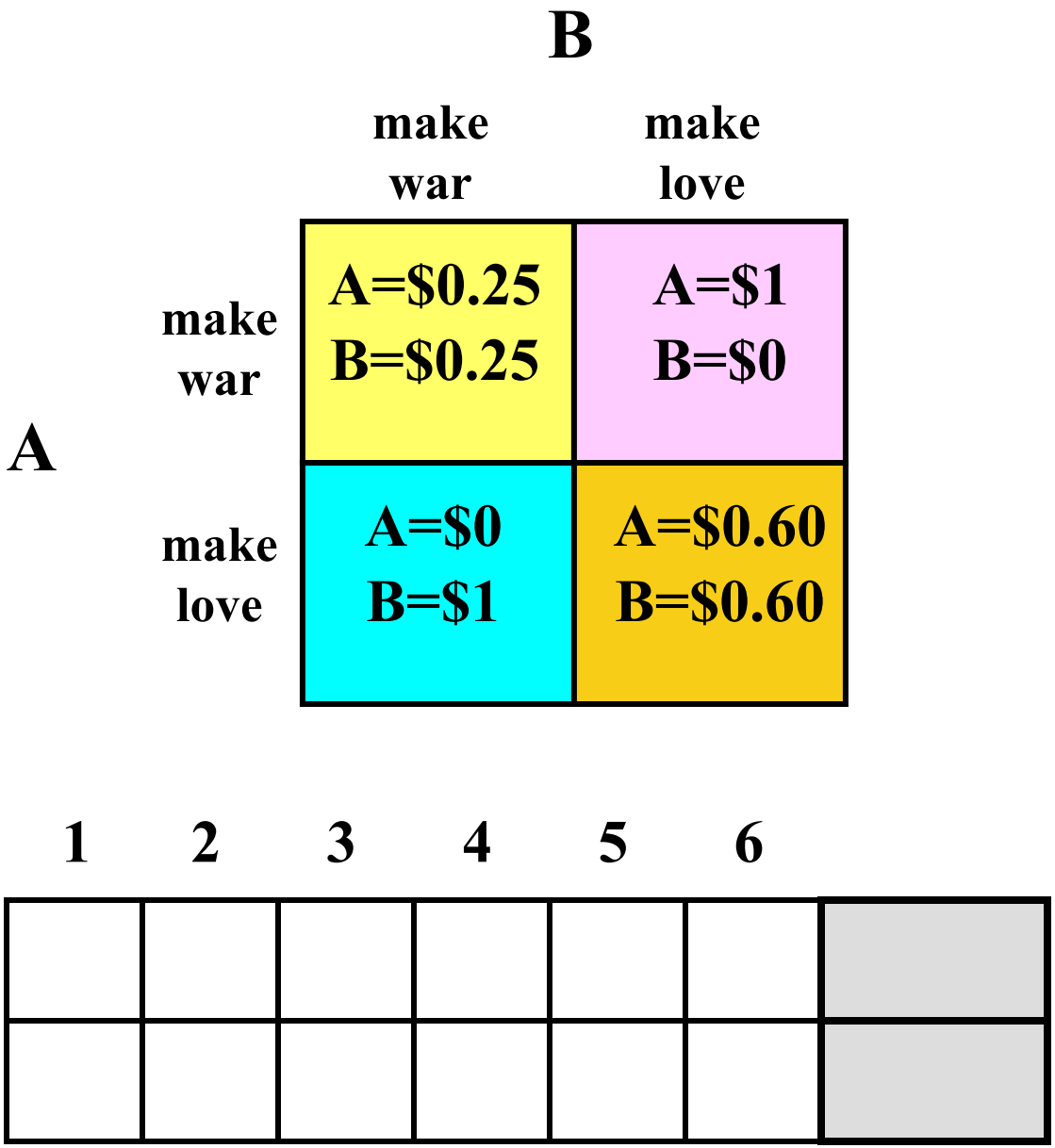
Nash Equilibrium

- A **Nash equilibrium** occurs when neither player can unilaterally act to improve their payoff.

		Mary	
		Not confess	Confess
Mike	Not confess	-2, -2	-10, 0
	Confess	0, -10	-8, -8

Competition, cooperation, & the "prisoners dilemma"

Company A's price	Company B's price: $200	Company B's price: $300
$200	A=$8K B=$8K	A=$13K B=$4K
$300	A=$4K B=$13K	A=$10K B=$10K


B
make war
make love
A
make war
make love
A=$0.25
B=$0.25
A=$1
B=$0
A=$0
B=$1
A=$0.60
B=$0.60

1
2
3
4
5
6
A
B