Presentation to accompany

Principles of Microconomics, Fourth Edition

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Lecture 2

Previously...

- 10 principles of Economics
  - individual choice
  - interactions
  - economy as whole
- Opportunity cost
- Production possibilities frontier

Previously…

- Trade off – an exchange of one thing for another
- Opportunity cost – the value of the next-highest-valued alternative
  – is the cost of passing up next best choice when making a decision

Previously...

Possibilities for tonight:

- Go out with your friends – second best
- Stay home and watch TV
- Go on a date – your choice
- Read economics textbook
- Go camping with your parents

- By going on a date you give up going out with your friends - trade off
- This trade off has a cost. What is the cost?
- This opportunity cost is
  - what you could get if not spending money on date
  - friendship and excitement from going out with friends

Previously...

- Use the concept of opportunity cost to explain following:
  - More people choose to get graduate degrees when the job market is poor
  - More people choose to do their own home repairs when the economy is slow
  - There are more parks in suburban areas than in urban areas
  - Fewer student enroll in classes that meet before 10 a.m.

Plan for Today

- Interdependence
- Absolute advantages
- Comparative advantages
- Gains from trade

Interdependence

Consider your typical morning:

- you wake up to an alarm clock made in Korea
- you pour yourself coffee from beans grown in Brazil
- you put on some clothes made of cotton grown in Georgia and sewn in factories in Thailand
- you watch the morning news broadcast from New York on your TV made in Japan

Interdependence

- Economics is about how societies produce and distribute goods in an attempt to satisfy the wants and needs of its members
- How do we satisfy our wants and needs in a global economy?
  - we can be economically self-sufficient
  - we can specialize and trade with others, leading to economic interdependence

Interdependence - Why?

Interdependence occurs because people are **better off** when they specialize and trade with others

Interdependence - Why?

Self-sufficiency vs. Interdependence

- self-sufficiency (ignoring each other):
    - each consumes what they each produce
    - the production possibilities frontier is also the consumption possibilities frontier
    - without trade, economic gains are diminished
- interdependence:
    - still can ignore each other but also can trade if it helps

Interdependence - Determinants

- Patterns of production and trade are based upon:
  - differences in opportunity costs
  - absolute advantages
  - comparative advantages

Interdependence - Example

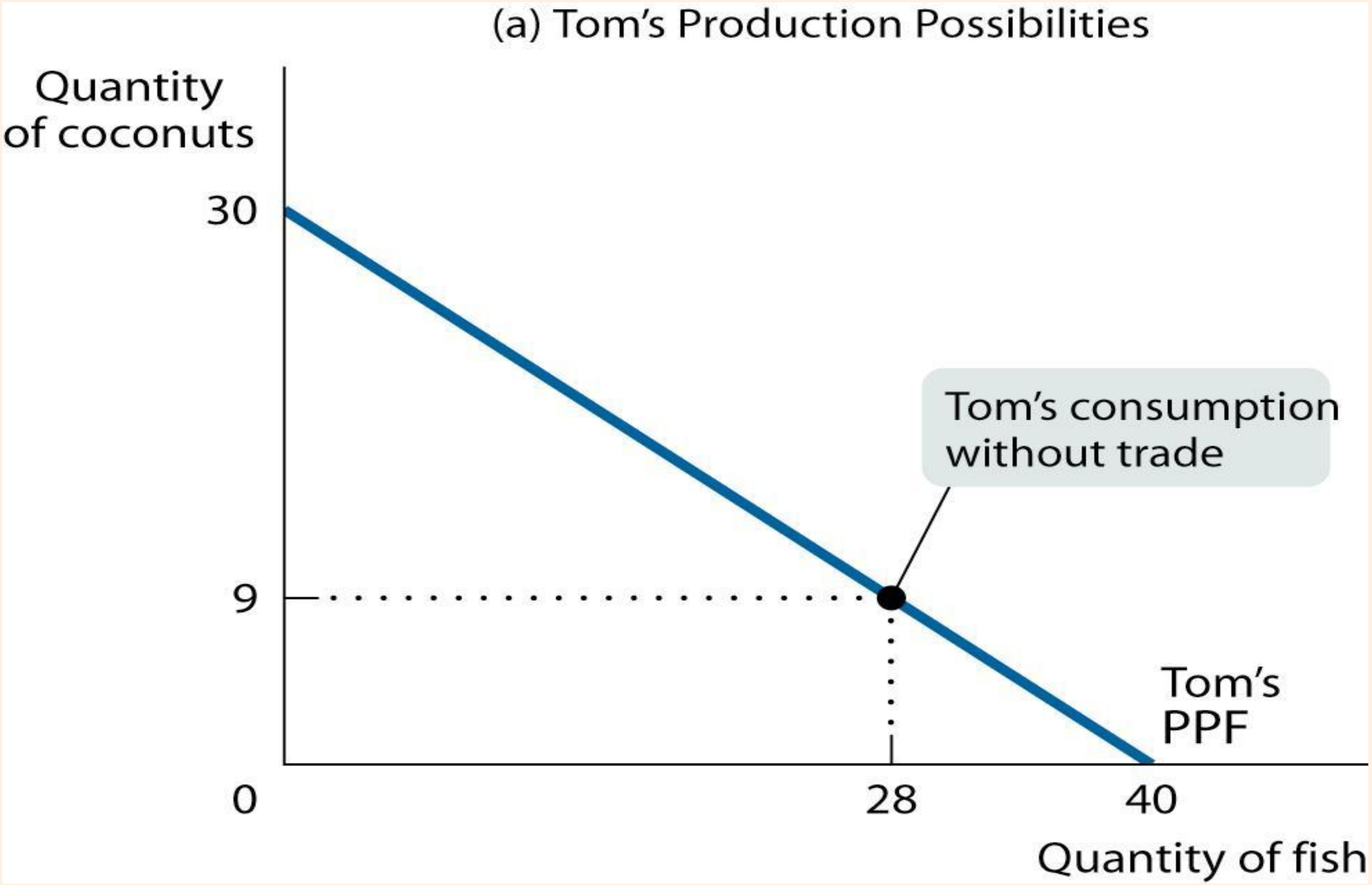
- Tom only cares about milk
  - can not open the milk bottle
  - can go to fridge to get cheese
- Jerry only likes cheese
  - can open the milk bottle
  - can not open the fridge to get cheese
- Self-sufficiency => both are unhappy
- Interdependence => Tom gets cheese; Jerry gets milk, they trade milk for cheese and are both happy

Interdependence - Example 2

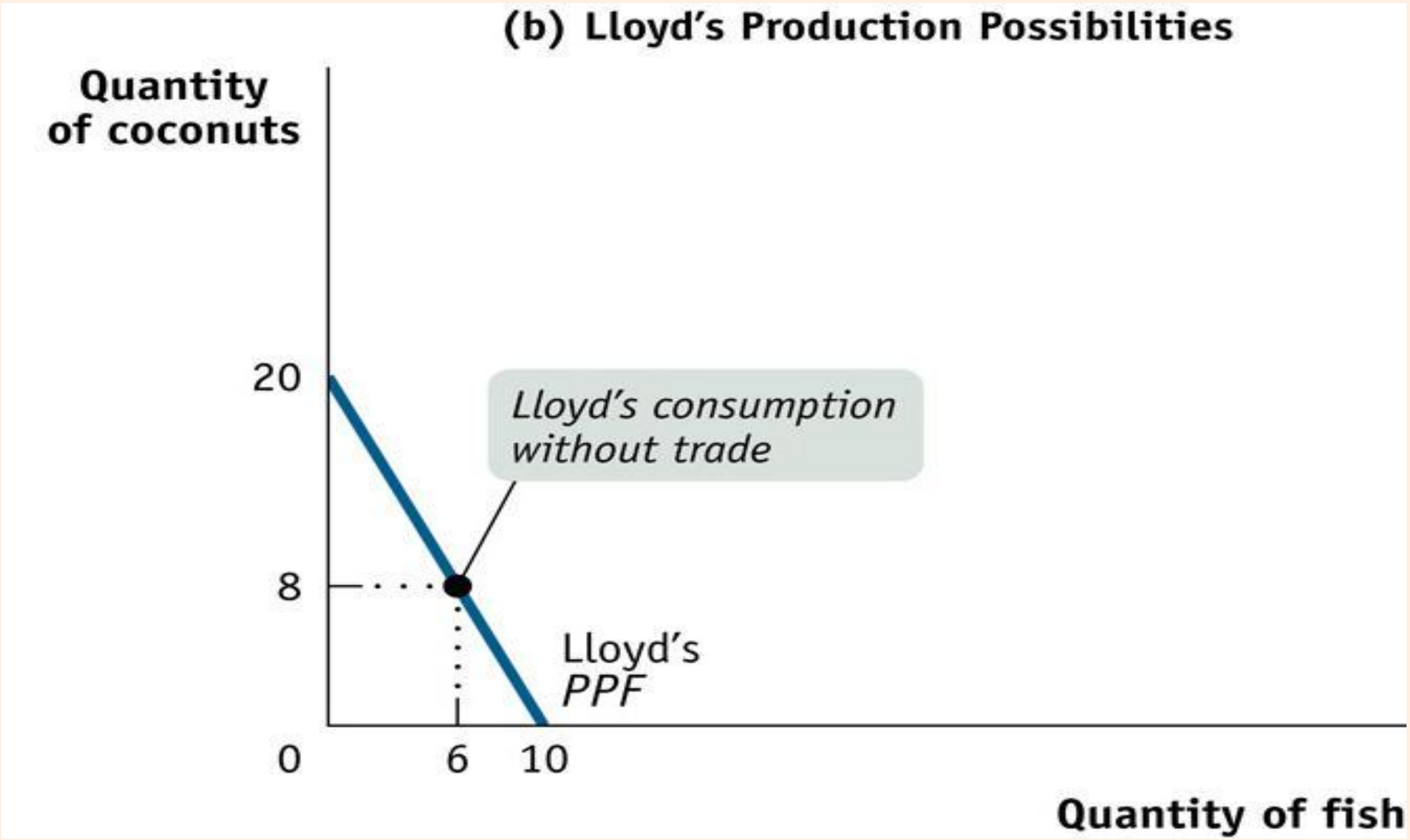
- Two producers/consumers – Tom, Lloyd
- Two goods – coconuts, fish

- What are their opportunity cost of coconuts (fish) production?
- Who has absolute advantage in what?
- Who has comparative advantage in what?
- What should they specialize in?
- What are their gains from trade?
- How does the trading line look like?

Interdependence - Example 2



Interdependence - Example 2



Interdependence - Example 2

- Tom and Lloyd will specialize in what they are good at and trade with the other

	Fish/day	Coconuts/day
Tom	40	30
Lloyd	10	20

- What are they good at?
- We will find out by looking at absolute and comparative advantages

Absolute Advantage

- The comparison among producers of a good according to their productivity
- Describes the productivity of one person, firm, or nation compared to that of another
- The producer that requires a smaller quantity of inputs to produce a good is said to have an absolute advantage in producing that good

Comparative Advantage

- Compares producers of a good according to their opportunity cost (whatever must be given up to obtain some item)
- The producer who has the smaller opportunity cost of producing a good is said to have a comparative advantage in producing that good

Abs. and Comp. Advantage

	Fish	Coconut	Opportunity cost of fish	Opportunity cost of coconut
Tom	40	30	3/4 of coconut	4/3 of fish
Lloyd	10	20	2 coconuts	1/2 of fish

- Tom: Absolute advantage in both goods – he can produce more of both
  Comparative advantage in fishing (lower opportunity cost of fishing than Lloyd)
- Lloyd: Absolute advantage in nothing – he produces less of both
  Comparative advantage in coconut picking (lower opportunity cost of coconuts than Tom)

Specialization

	Fish	Coconut	Opportunity cost of fish	Opportunity cost of coconut
Tom	40	30	3/4 of coconut	4/3 of fish
Lloyd	10	20	2 coconuts	1/2 fish

- Tom has lower opportunity cost of fish ($3/4 < 2$), i.e. he has comparative advantage in fishing so he should specialize in fishing
- Lloyd has lower opportunity cost of coconuts ($1/2 < 4/3$), i.e. he has comparative advantage in picking them so he should specialize in picking coconuts

Conditions of Trade

- What is the appropriate exchange rate between fish & coconuts?
- What is the price of the goods?

Conditions of Trade

	Fish	Coconut	Opportunity cost of fish	Opportunity cost of coconut
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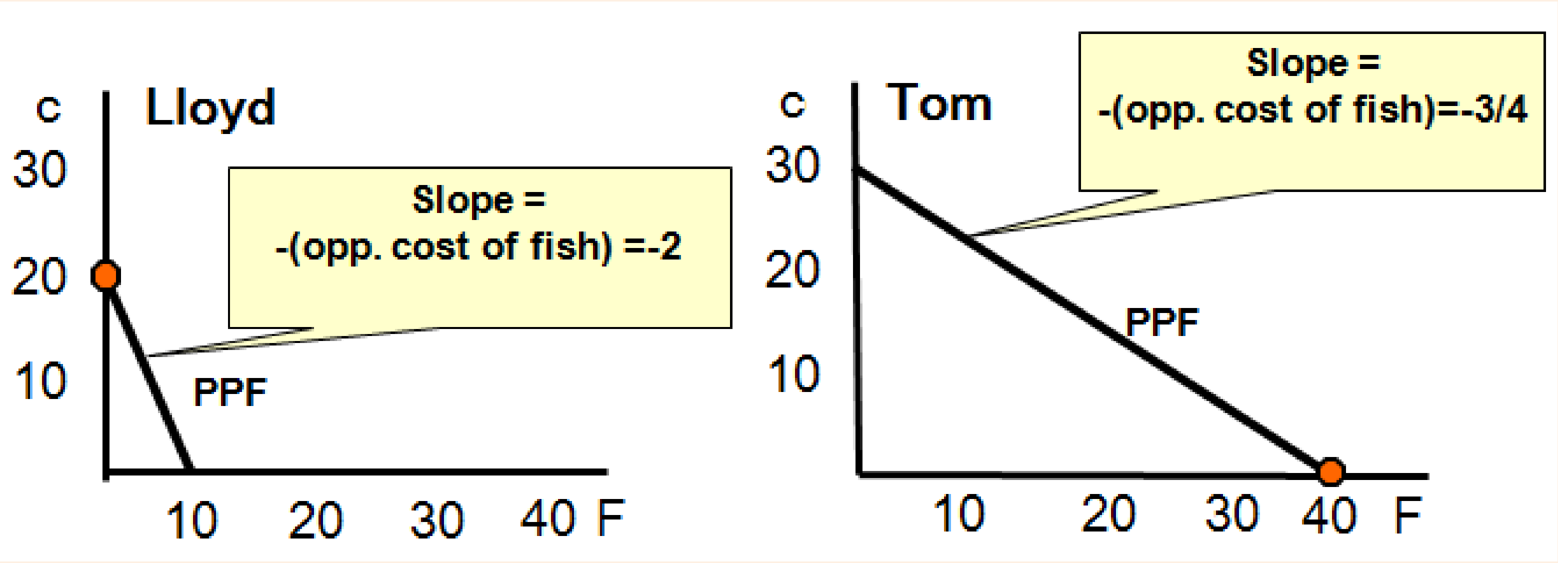


Conditions of Trade

- Price (exchange rate) of the goods traded is determined by the opportunity costs
- Trade has to be beneficial for both parties:
  - the seller has to receive higher price/payoff than he would get without trade (his opportunity costs)
  - the buyer has to buy cheaper than he would be able to produce on his own
- Price must be between the opportunity costs of the two parties, i.e. from interval <3/4,2>

Conditions of Trade

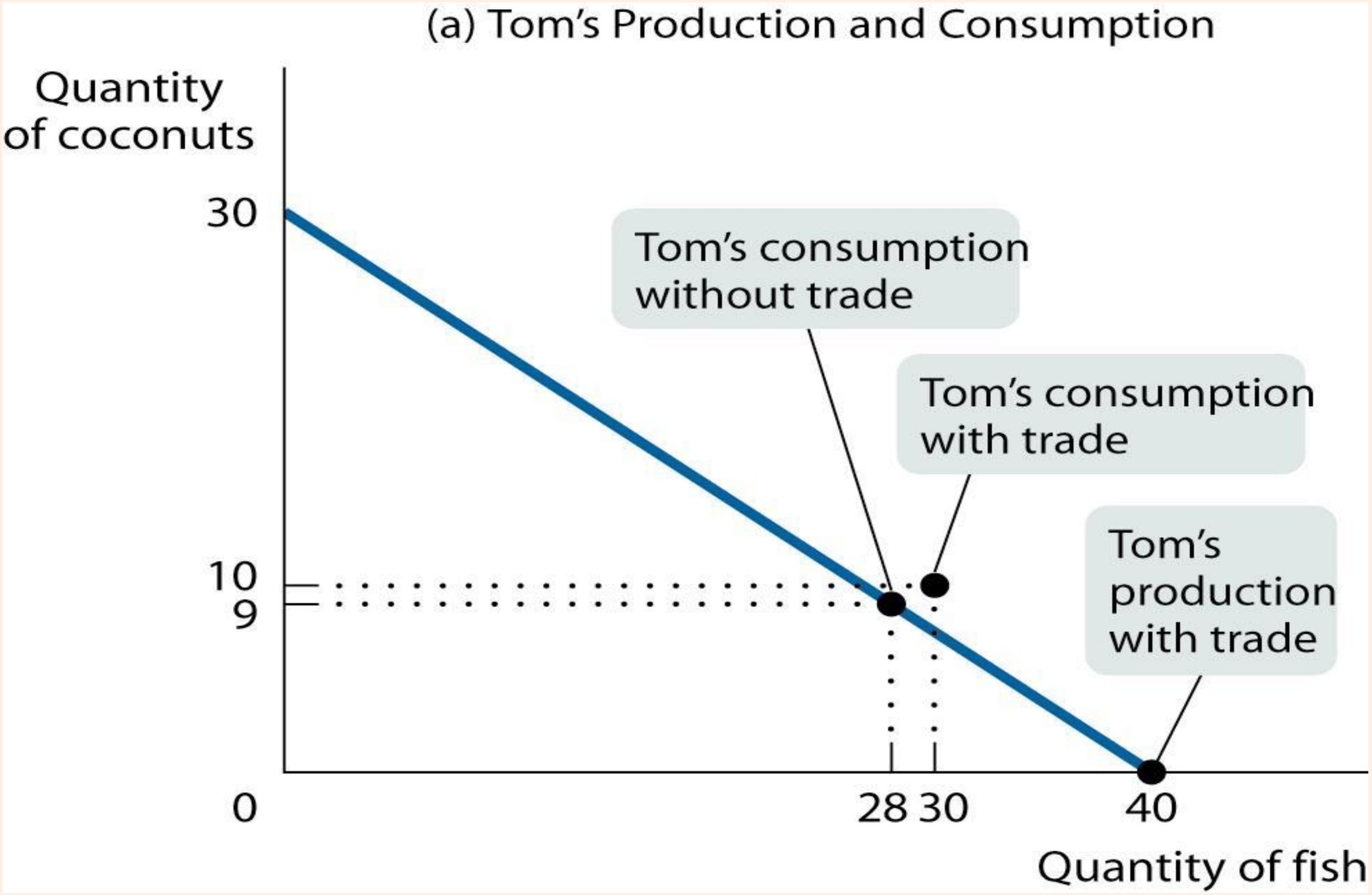
- Tom specializes in fish
  Tom has opportunity cost 3/4, Lloyd 2
- Lloyd specializes in coconuts
  Lloyd has opportunity cost 1/2 , Tom 4/3
- They decide about the price in between,
  e.g. exchange rate of 1 coconut for 1 fish
- New opportunity cost:
  - Tom: Opp.cost of fish with trade = 1 coconut
  - Lloyd: Opp.cost of fish with trade = 1 coconut

Gains from Trade

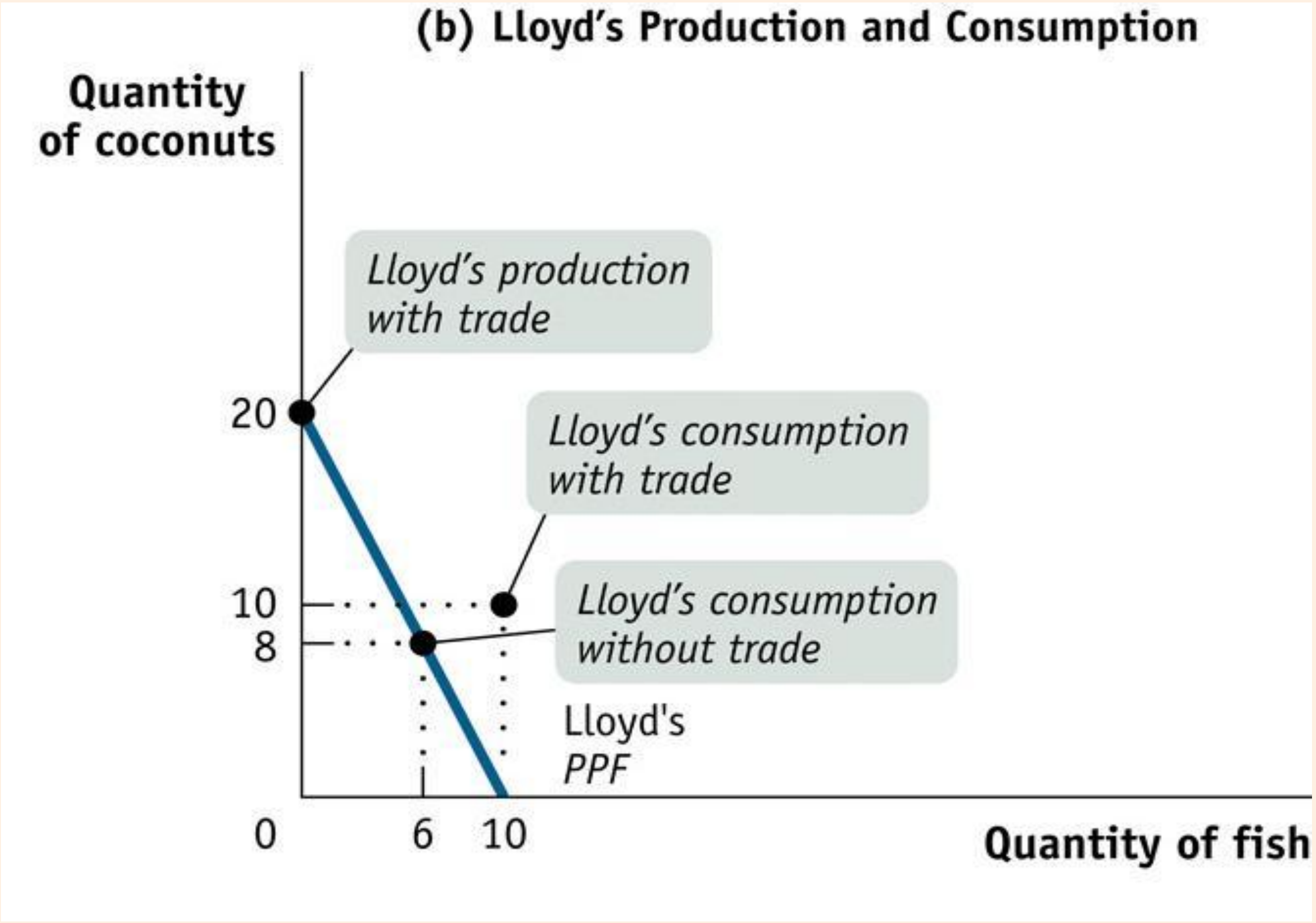
		Without trade		With trade		
		Production	Consumption	Production	Consumption	Gains from trade
Tom	Fish	28	28	40	30	+2
	Coconuts	9	9	0	10	+1
Lloyd	Fish	6	6	0	10	+4
	Coconuts	8	8	20	10	+2

- Tom's consumption of fish increases by two, and his consumption of coconuts increases by one
- Lloyd's consumption of fish increases by four, and his consumption of coconuts increases by two

Gains from Trade



Gains from Trade



Trading Line

- Slope of the PPF – opportunity cost of commodity 1 (horizontal axes) (with minus sign)
- Slope of the trading line – same thing BUT the opportunity cost is different = agreed price
- Drawing Trading line:

  One point – the maximum production of the good the country/producer specializes in

  Second point – maximum the producer can get if he traded all his production for the other commodity

Trading Line

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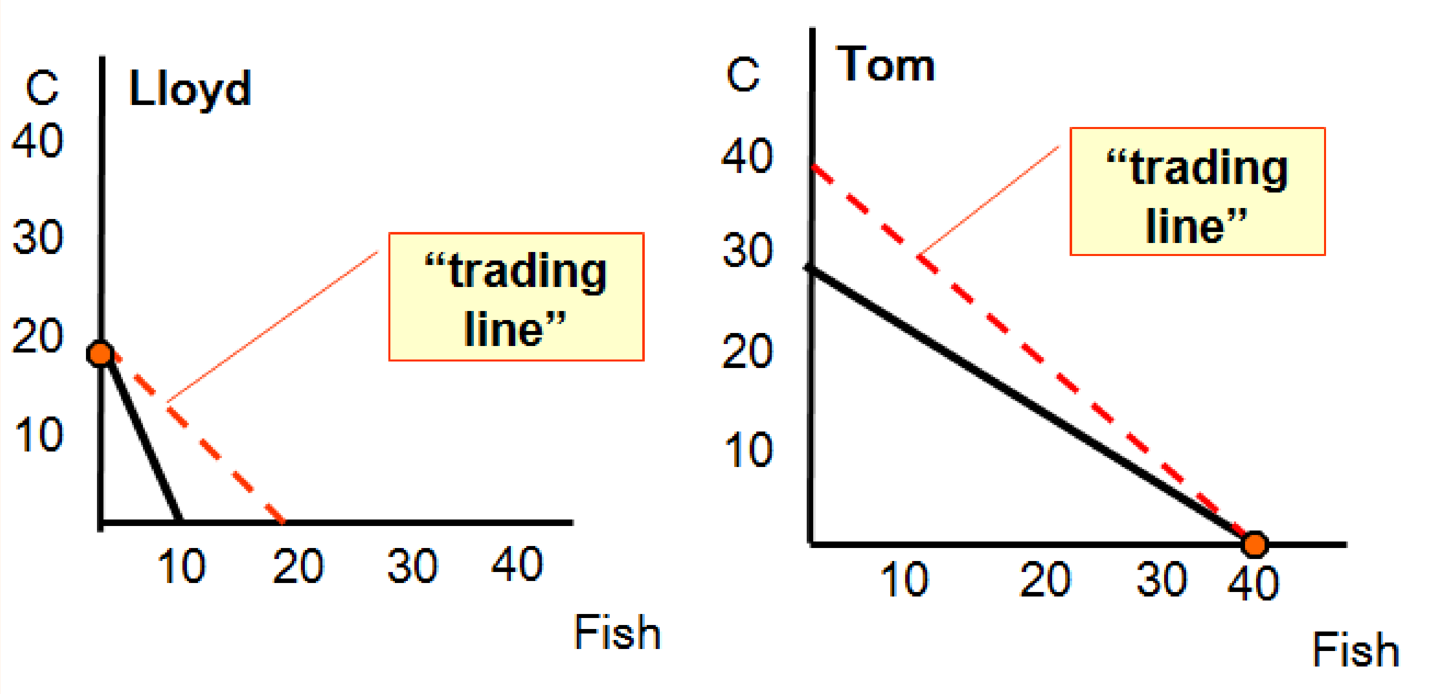

Applications

- Tiger Woods mowing his lawn
- Surgeon typing his bills

- Should the United States trade with other countries?
- Current situation – trade barriers & ‘Beggar thy neighbour’ policies

Note: Each country has many citizens with different interests. International trade can make some individuals worse off, even as it makes the country as a whole better off

Summary I

- Each person consumes goods and services produced by many other people both in our country and around the world
- Interdependence and trade are desirable because they allow everyone to enjoy a greater quantity and variety of goods and services

Summary II

- There are two ways to compare the ability of two people producing a good
  - The person who can produce a good with a smaller quantity of inputs has an absolute advantage
  - The person with a smaller opportunity cost has a comparative advantage

Summary III

- The gains from trade are based on comparative advantage, not absolute advantage
- Trade makes everyone better off because it allows people to specialize in those activities in which they have a comparative advantage
- The principle of comparative advantage applies to countries as well as people

Summary IV

- One country can have absolute advantage in both goods. Still there are benefits from trading
- On country can not have comparative advantage in both goods
- Exchange rate (price, how many C for one F) has to be between opportunity cost of Tom and Lloyd
- Trading line always lies above the PPF. Trading lines are parallel and in general different for two countries