Lecture 16
AAE 374 Fall 2009

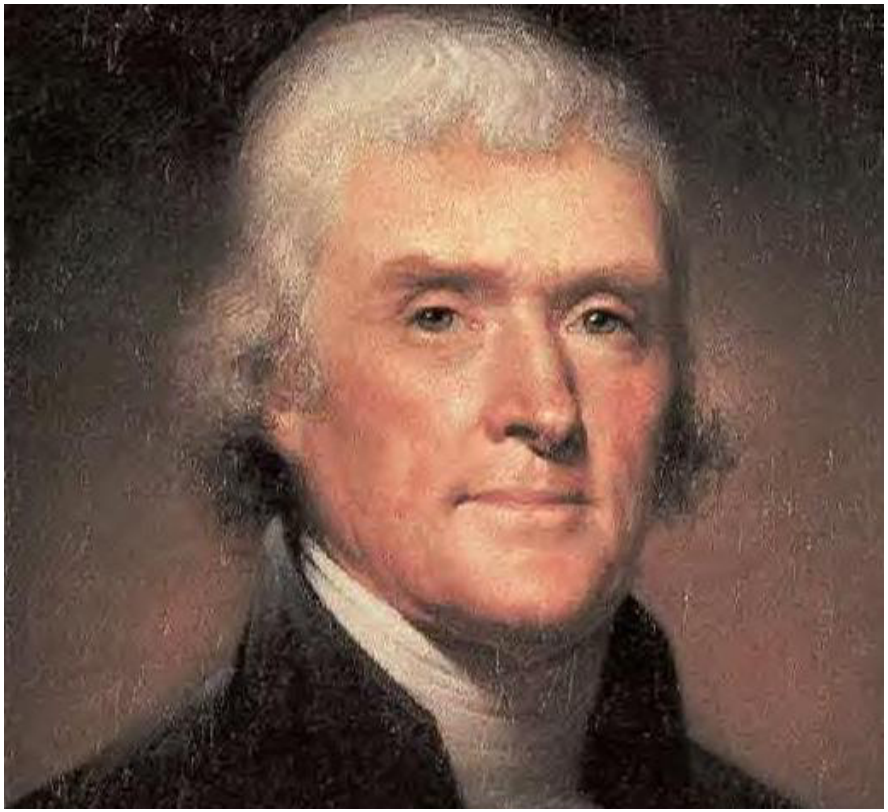
Overview:

- Jefferson vs Madison
- Rivalry and Excludability
- Increasing Returns & Monopoly
- Modern day: Stallman vs Lanjouw
- TRIP-ing on drugs w/Brad

“Intellectual Property” and all that

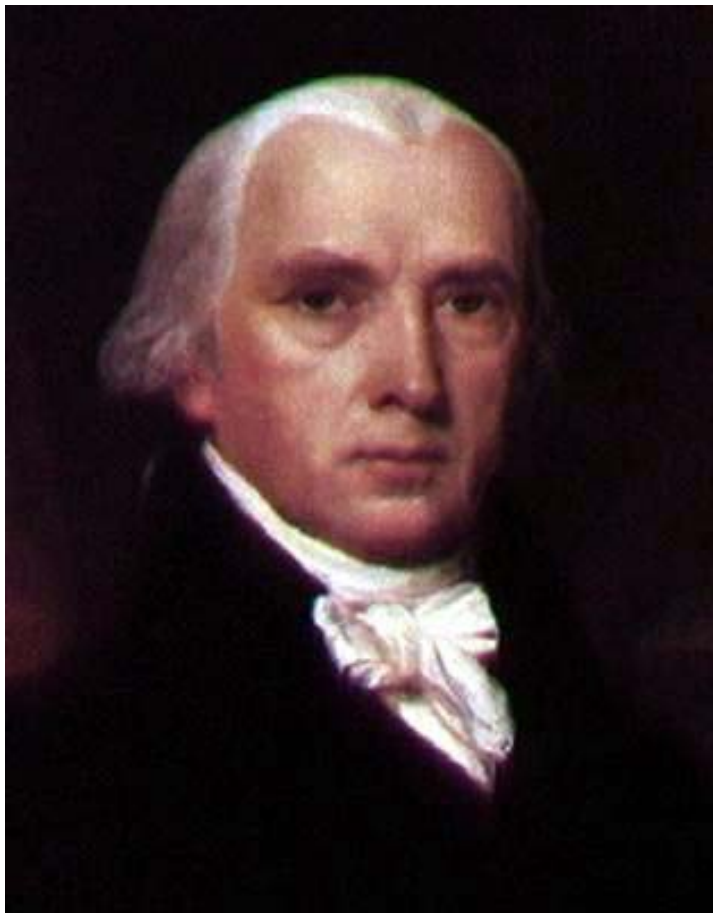
- Policy debates center around institutional and legal framework for “IP”
  - Legally generated restrictions on transactions.
  - Major focus is to generate monopolies.
  - *…wait, aren’t monopolies generally a bad thing?*

Thomas Jefferson vs James Madison (1788)



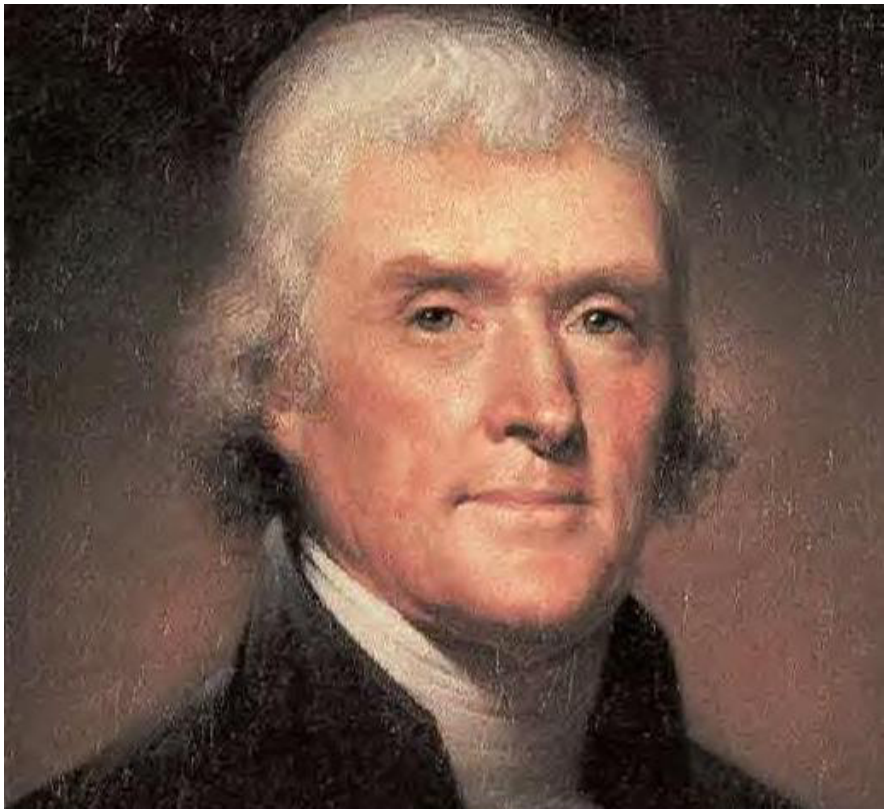
"The saying there shall be no monopolies lessens the incitements to ingenuity […] but the benefit even of limited monopolies is too doubtful to be opposed to that of their general suppression."

Thomas Jefferson vs James Madison (1788)



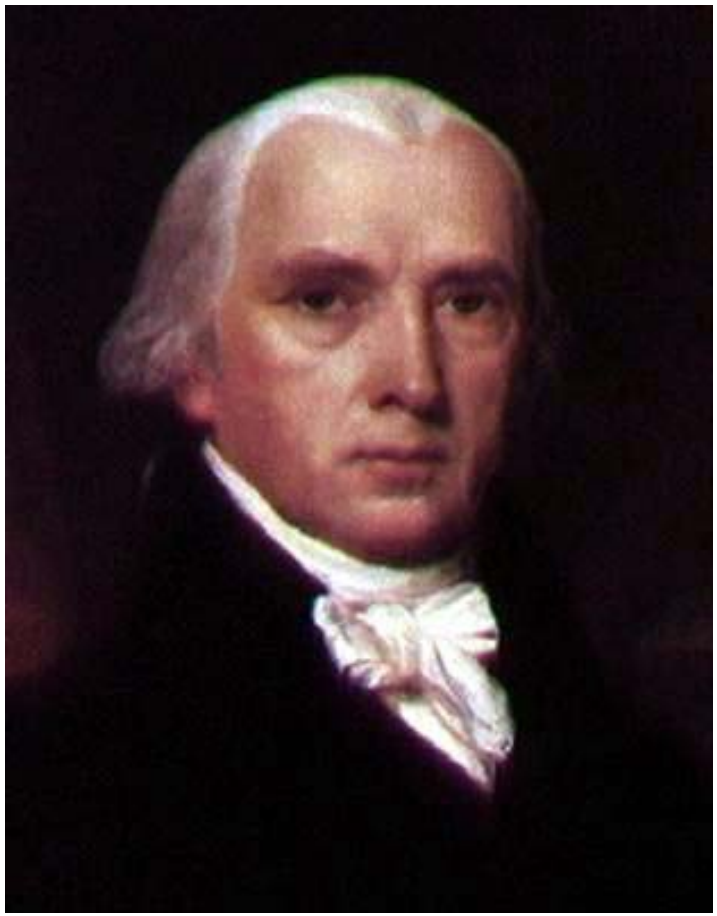
"With regard to monopolies they are justly classed among the greatest nuisances in government. But is it clear that as encouragements to literary works and ingenious discoveries, they are not too valuable to be wholly renounced?"

Jeffersonian Argument



- "he who lights his taper at mine, receives light without darkening me.“
- On par with freedom of speech, religion, habeas corpus: can threaten free society, bind future generations to past ones

Thomas Jefferson vs James Madison (1788)



- Would-be innovators need incentives to generate and publicize.
- Monopolies are a nuisance and dangerous but our new popular government has great institutions.

First let's think carefully about when hard choices have to be made…

Rival versus Non-Rival; Excludable vs. Non-Excludable

	Rival
High Intrinsic Excludability	▪ (My) piece of fried chicken ▪ My *Soprano's* DVD set
Legally-Generated Excludability	• Low congestion toll roads
Low Excludability	▪ *Fish in the sea* ▪ Party Keg

Rivalry and Excludability

- Essence of non-rival goods is that once created, they may leak out and generate further uses and benefits

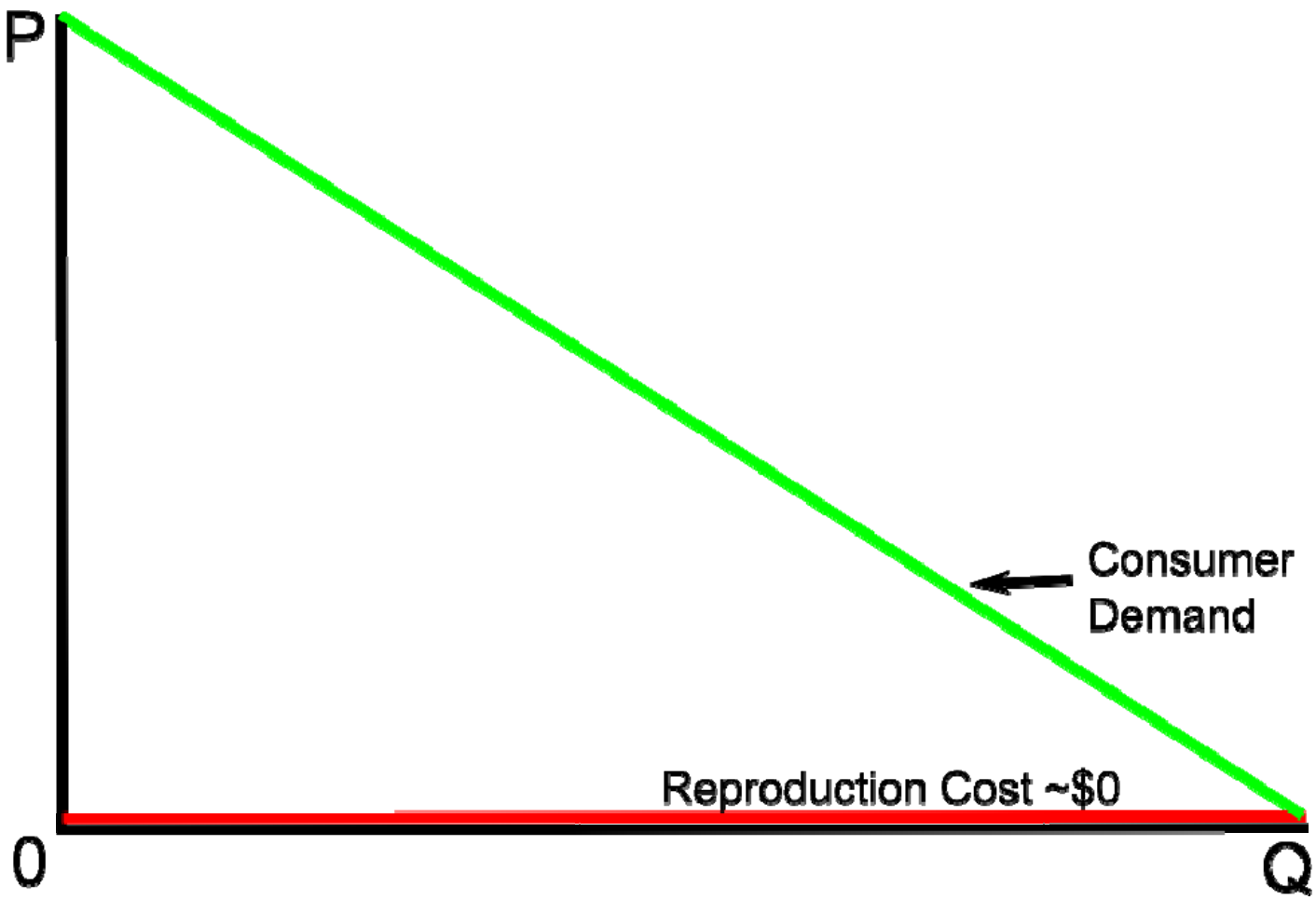
- Whether a good is excludable depends on laws, rules and enforcement — excludability is a human construct.
  - "Intellectual property" law (patents, etc.) is about making ideas into excludable goods.
  - This is of course an area of huge international dispute—more on this later.

Fixed costs & increasing returns

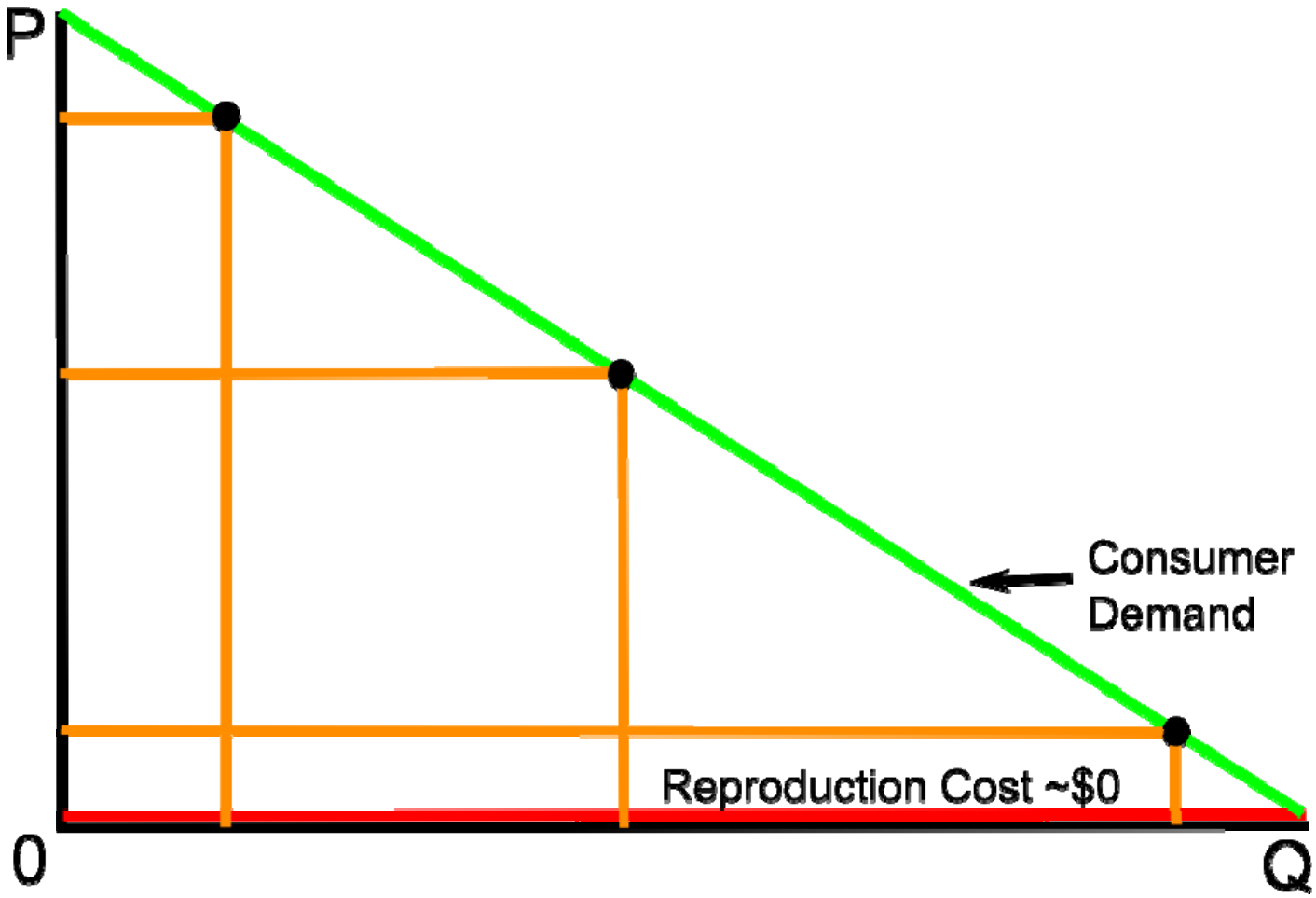
- Economically relevant characteristic of knowledge: subject to high fixed costs, low marginal costs

- Computer software: idea-based product that have huge fixed costs
  - Producing the first copy of Windows Vista© took thousands of hours.
  - However, the marginal costs of producing the second, third… copies is a few pennies.
  - How do to sell this stuff?

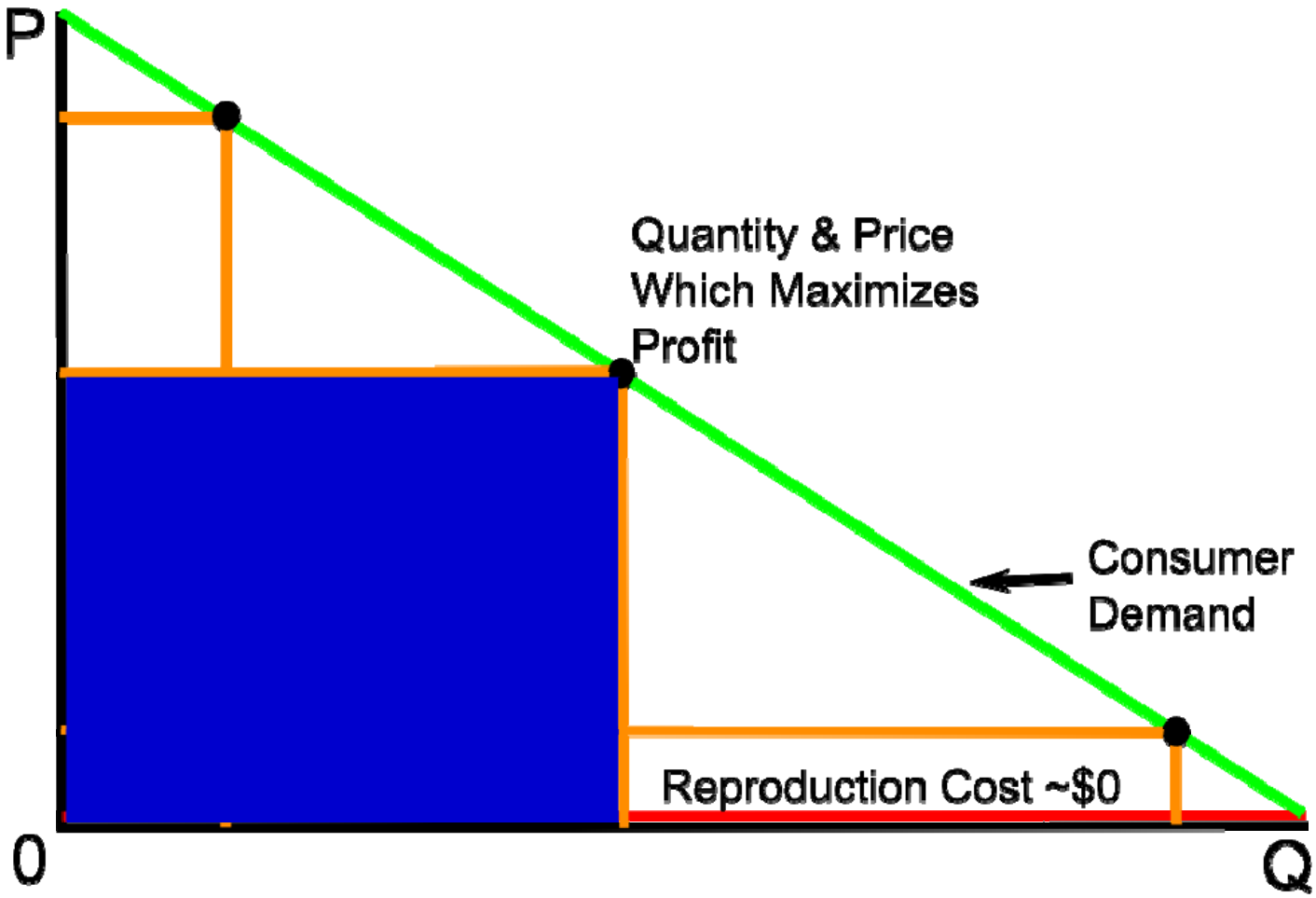
Choose price and quantity based on demand!



Costs negligible, so maximize revenues (boxes)



Solution:
Restrict output to drive up the price.



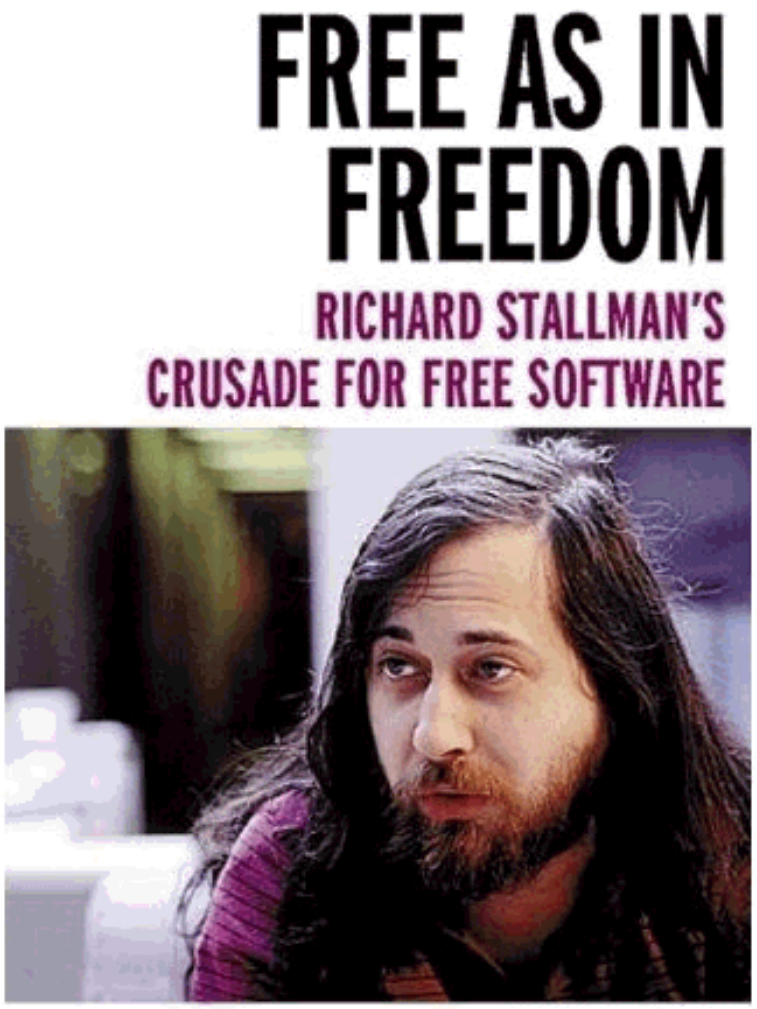
What happens if competition is allowed?

Implications of IRTS

- Ubiquity of fixed costs in knowledge-intensive activities suggest that these sorts of IRTS problems are non-trivial

- Move Jefferson vs Madison debate to modern day: Stallman vs Lanjouw

Stallman vs Lanjouw



- Copyleft (requirement to share source code of programs spurs innovation)
- Copyright for creative content like video game graphics
- Says software patents deadly:
  - EPO issued a patent on the progress bar
  - EPO: accepting payment via credit cards

Stallman vs Lanjouw

Would insert photo of Lanjouw if granted rights.

- Monopoly essential to investment.
- Depends on institutional enforcement of “goodwill” clause.

Copyright and Legally-Generated Excludability

- Effects of software patents might have on technological development?

- If not for Copyright, it is possible that Gates (via IBM) would have decreased the investments to create that product.
  - Reasons this might/might not have this effect?

Legally-Generated Excludability

- Enforcement and definitions of laws will influence generation of new technologies.
- Contra Jefferson: Douglas North argues creation of IP rights has been key to modern (sustained) economic growth.
- Frederick Howe (Confessions of a Monopolist, 1906): “Monopoly and corruption are cause and effect.”
- Just as “resource curse,” monopoly can create perverse incentives and undermine institutions

Possibility of regulator capture

	FDA Position	To/from	Regulated affiliation
Michael A. Friedman, M.D	acting commissioner	to	G. D. Searle & Co
Terry Medley	food advisory committee	to	Dupont
Margaret Miller	Deputy Director of Human Food Safety	from	Monsanto
Michael Taylor	executive assistant to commissioner, later Deputy Commissioner	both	Monsanto
Suzanne Sechen	Research reviewer	from	Monsanto

In contrast to the “good” institutions of the US things could get worse:

Six-year-old girl from Beijing (9/4/2009):

> ‘When I grow up I want to be an official,’ said the girl, whose face was blurred to protect her identity.
>
> ‘What kind of official?’ the interviewer asked.
>
> ‘A corrupt official because corrupt officials have a lot of things,’ she replied.”

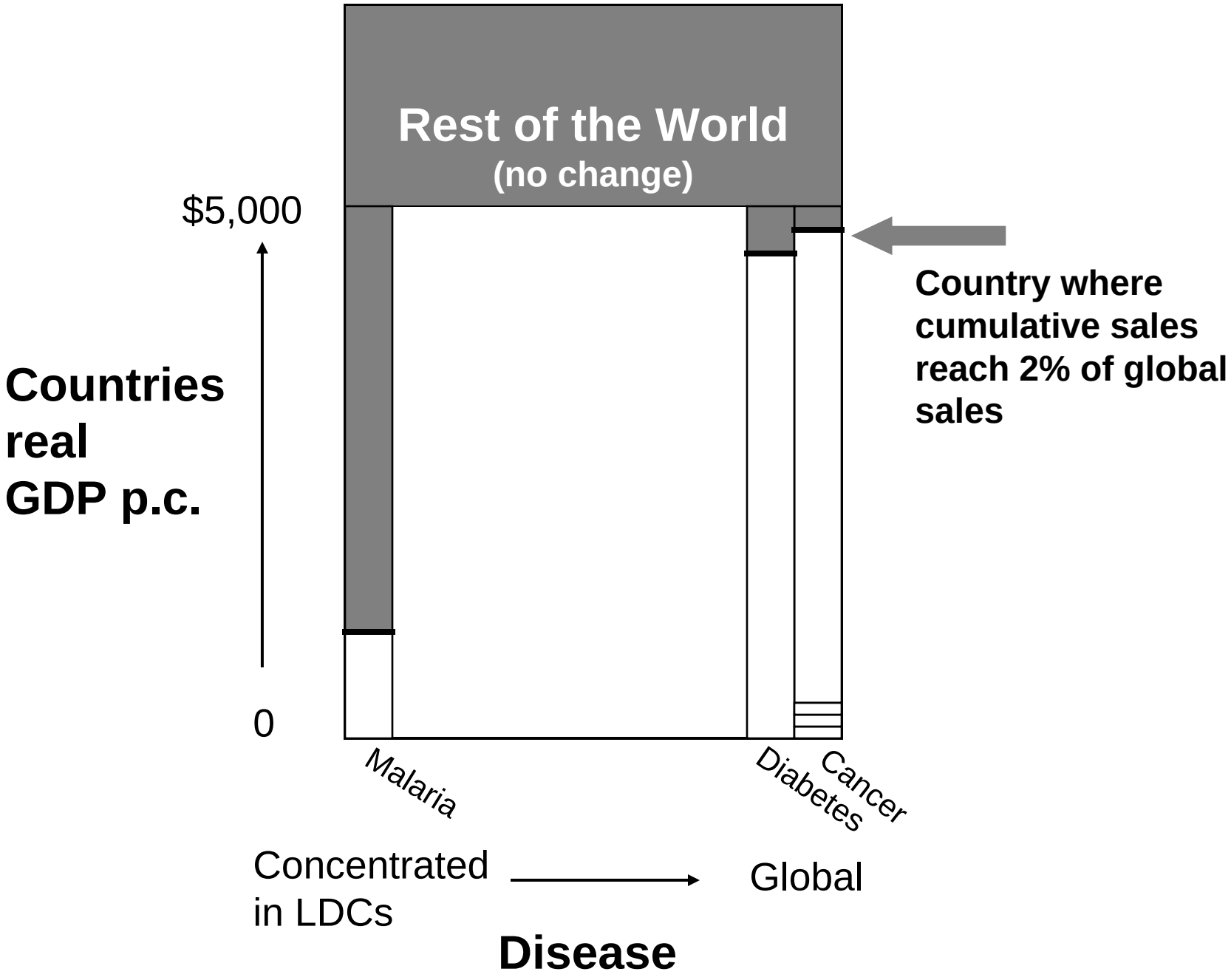
Questions for Discussion

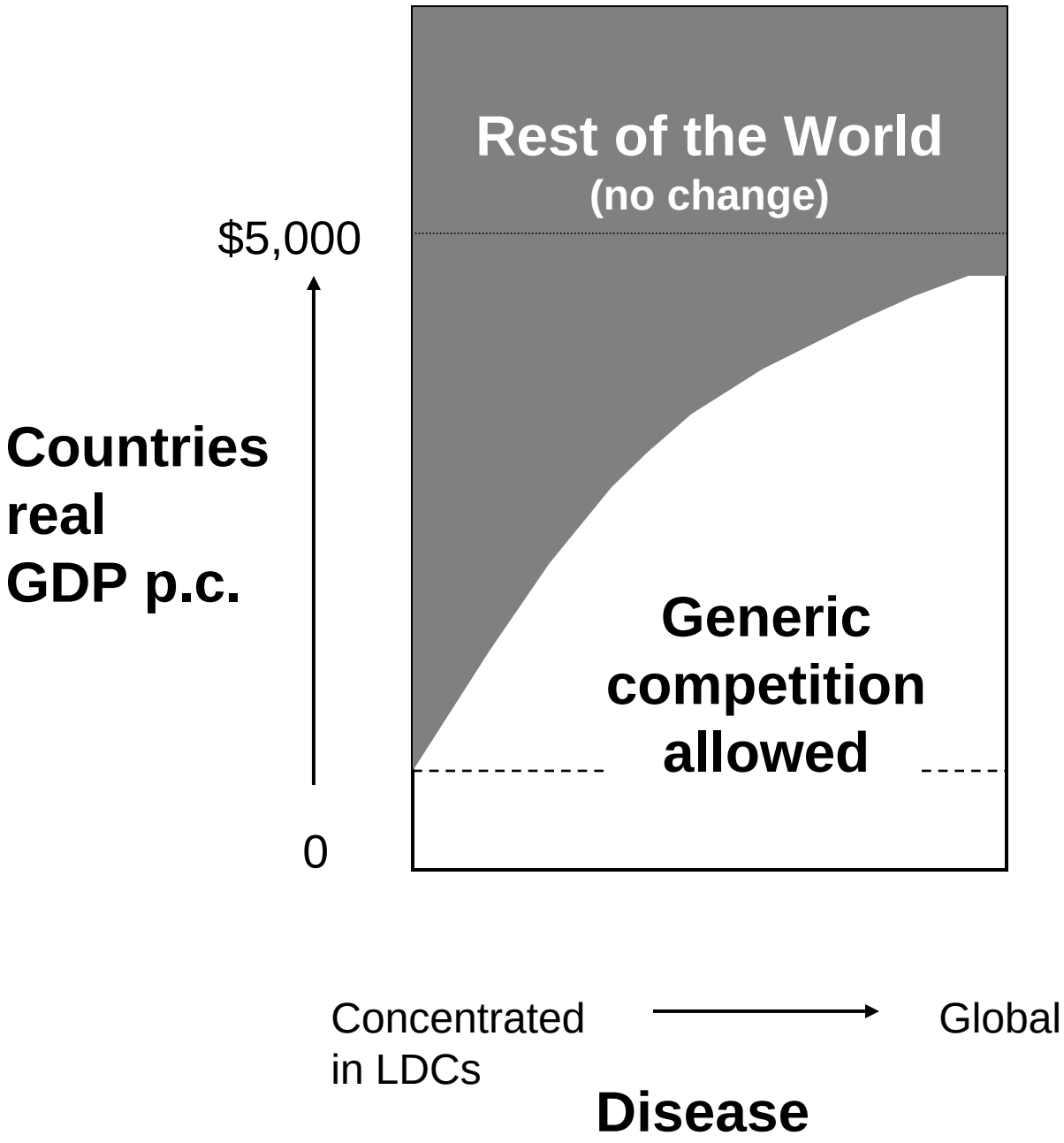
- What is TRIPS?
- Why is there such a strong push for the protection of intellectual property rights in the area of pharmaceuticals?
- What are the potential private and social benefits of that protection?
- What are the costs?
- How might those calculations vary for wealthier versus poor countries?
- What challenge does this pose to international rules or regulations that relate to intellectual property rights?
- What is Lanjouw's policy approach?

Basics of Lanjouw

- Drug markets different - some diseases may have most of their market in the developing world (malaria) while others are global with global markets for their therapies (cancer).
- Need to increase research effort on developing country diseases -> good argument for private sector involvement/patents in LDCs.
- Poor countries barely figure in the worldwide market for global products. Half the world's pop represents 2% of spending on cardiovascular drugs. Thus, it is hard to argue that patents in poor countries are important to support R&D on these diseases.
- Bottom line - optimal patent system would treat drugs differently according to their different world markets

- Her proposal: protection evolves as a country develops and with changes in disease incidence. Protect markets as they become more important to firms.


Rest of the World
(no change)
$5,000
0
Countries
real
GDP p.c.
Country where
cumulative sales
reach 2% of global
sales
Malaria
Diabetes
Cancer
Concentrated
in LDCs
Global
Disease


Rest of the World
(no change)
$5,000
Countries
real
GDP p.c.
Generic
competition
allowed
0
Concentrated
in LDCs
Global
Disease

The Mechanism

Is to require a declaration in request for a foreign filing license:

I, the undersigned, request a license to make foreign filings covering the invention described in U.S. patent application no. X, with the understanding that this permission will not be used to restrict the sale or manufacture of drugs for ‘Cancer’ in ‘India’ by suing for patent infringement in ‘India’.

Fixed costs & increasing returns

- If each of us with a DVD-R drive could simply copy the Windows© software and sell it, what would happen to the price? (E.g. Nehru place in India)
- Microsoft would be unlikely to ever recoup their fixed costs, and Bill Gates would have to sell his mansion (or its least its mood-activated sound system).
- Ubiquity of fixed costs in knowledge-intensive activities suggest that these sorts of IRTS problems are non-trivial
- Has implications for trade and trade

Patents and Legally-Generated Excludability

- Software Patent law makes it illegal to replicate “key innovations” of existing software.

- Some examples from the European Patent Office (the US is even more in this direction): (Source: “Patent Absurdity”, The Guardian 6/23/05. See Course Page.)
  - Issued a patent on the progress bar
  - One on accepting payment via credit cards
  - Effects this might have on technological development?

Copyright issues

Issues this type of case raises?

Bigger examples for North?

Bigger examples for South?