

The Digital Continent: A Planet of Apes?

Toshihiko Hayashi

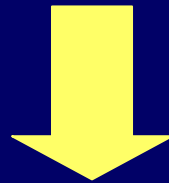
hayashi@u-air.ac.jp

Professor of Economics, University of the Air

2002.9.5

A Great Migration 1

Information Technology Revolution



Post IT Society

= Ubiquitous Communication

A Great Migration 2

**Information Technology Will
Collaborate with:**

Biotechnology, Environmental
Technology, Genome Technology,
Nanotechnology, Human
Technology, Quantum Technology

A Great Migration 3

Speed of Data Transmission

Kilobits per Second Megabits
Gigabits Terabits Exabits
Petabits Zettabits Yottabits
Googabits

A Great Migration 4

From Advanced Information Society



Real World

A Great Migration 5

To Post-IT Society



Cyber World

Real World

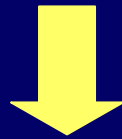
Digital Continent 1

Three Examples of Modal Change

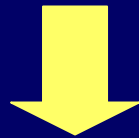
- Network Competition
- University
- Intellectual Property

Network Competition 1

Perfect Competition in Atomless Market



Monopolistic Competition



Network Competition

Network Competition 2

- Threshold for Penetration
- Landslide Victory
- Winner Takes All
- Competition for De Facto Standard
- Survival of the Not-fittest
- Lock-in Effect/ Path Dependency

Network Competition 3

- Competition Policy Reconsidered
Microsoft vs U.S.

1 Yen Bidding

- Can Government Pick the Best System?

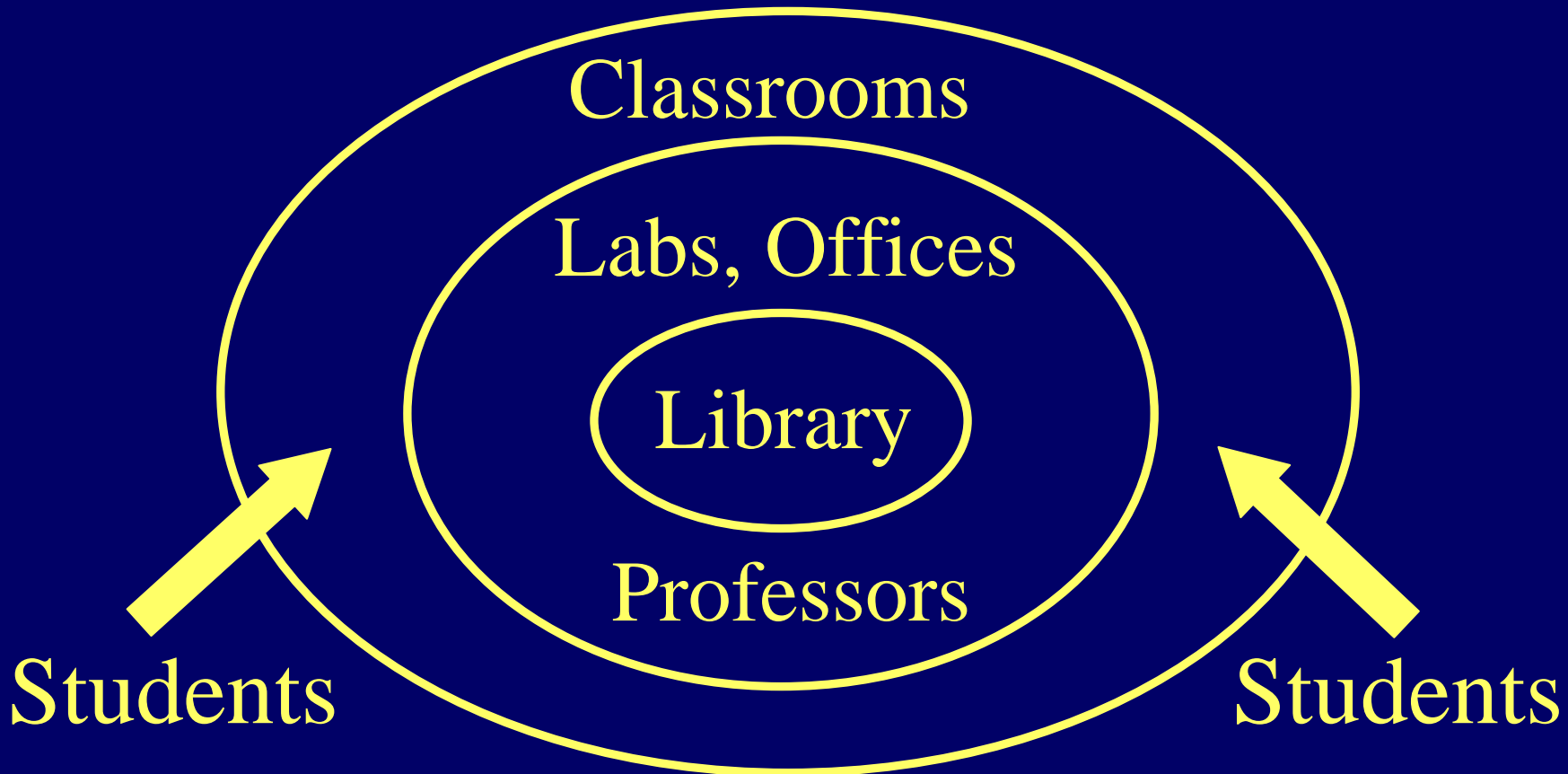
Regulation, “Yes” ?

First Mover Advantage or

Gerschenkron

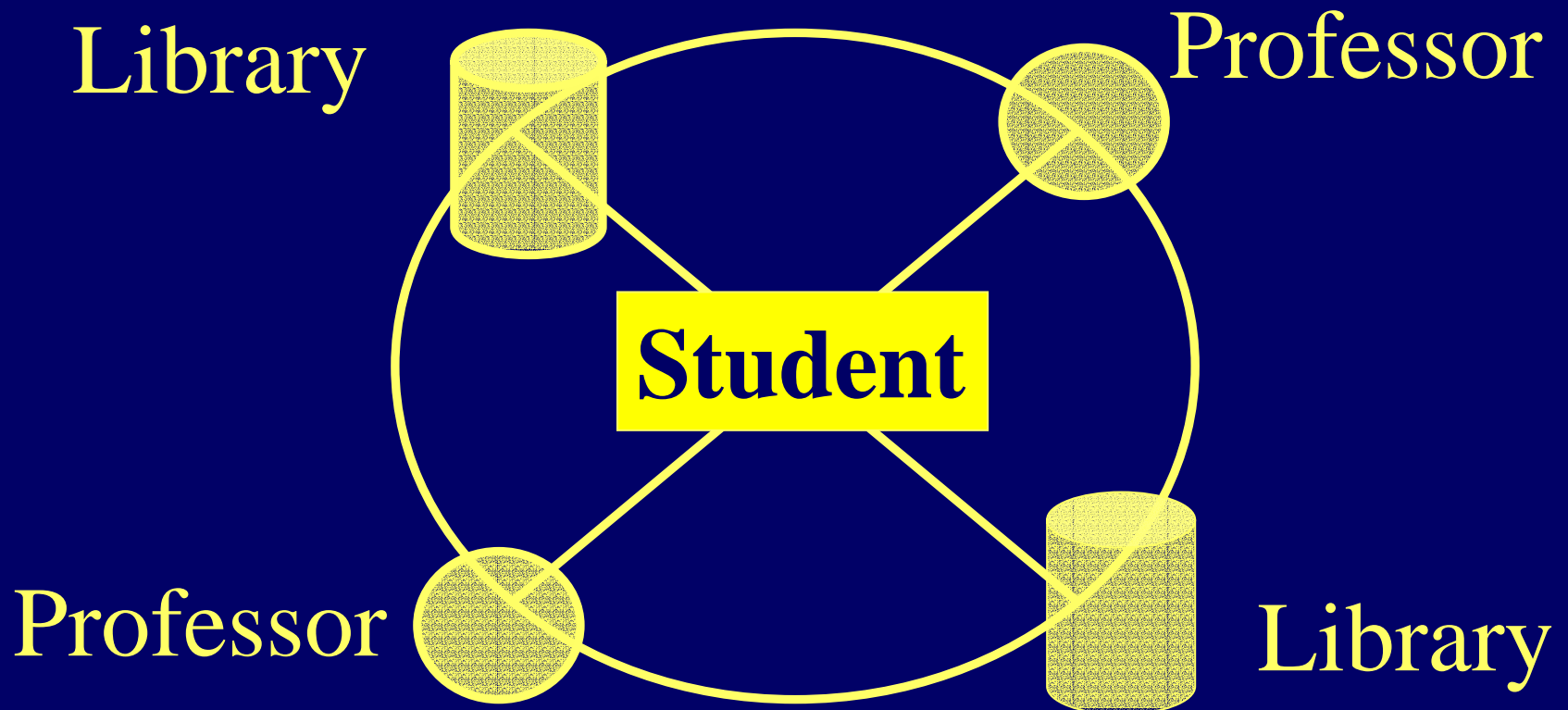
University Model 1

2500 Year Old Business Model



University Model 2

Cyber University



University Model 3

- Distance Learning, an Inferior Substitute?
- Did Printing Technology Give Inferior Substitute for Religion?
- Personal Experience from University of the Air

Copyright 1

- Why Copyright Protection?
 - Private Property vs Fair Use
- Form and Substance
 - Snow White: Grimms and Disney
- Business Model for Content Market
 - Royalty Model

Copyright 2

- Digital Revolution

Electronic Contents

Copies and Original

Editing and Parts or Bits

Seamless Transmission

Copyright 3

- Impacts of Napster and Gnutella
 - Peer-to-peer Exchange of Digital Files
- Copyright Protection
 - Encryption Technology
 - Electronic Watermark
 - Copyright Code Database

Copyright 4

- Search for New Business Models
 - Super Distribution
 - Broadcasting Model
- Public Domain Approach
 - Linux
 - Digital and Live Performance

The Ultimate Revolution Ahead?

- Reality Augmented Reality
 Enhancement of Cognition

A Whale in a Pond ?

- Frame of Cognizance
 From Inner Brain to Outer Brain
 Who am I ?

Governance of Post IT Society

- Civilian Control of Technology
- Role of Engineers
- Governance of Cyberspace
- Whistle Blowing
- Ethical Value before Economic Value

Nothing IS New in the Network

- Digital Editing: Editing of What ?
- New Combination of What ?
- Culture Resides in the Real World

The Planet of the Apes

- Astronaut Taylor lands in a planet after a three million two hundred thousand light year voyage in the space.
- The planet was inhabited by the highly developed Apes and sub-ape humans.

Human Dignity Again

- Ubiquitous Surveillance ?
- New Code of Conduct for a Big Existence on the Globe
- New Definition of Freedom
- New Definition of Creativity

Another Planet of the Apes?

- We must learn to master and control technology development, govern our borderless society, and anchor firmly on the physical ground.
- If we fail, we will fall slaves to the Apes in the Digital Continent - Computers.

The Terrestrial Computer

**SIIT Hard
Disk**



Tsuji CPU

Takemura Server