

# Paradiso Comments

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paradiso   
INTERNET FOR THE FUTURE

Wouldn't it be paradoxical to explore the Future Internet  
without thoroughly exploring what the future of our societies should be ?

# Future Internet & Society

- Global productive impacts
- Inevitable (economic) threats
- Surprises

# Innovation as a Catalyst for Growth

- Schumpeter:  
Disruptive innovation



- Solow: Critical role of  
human capital,  
technical change



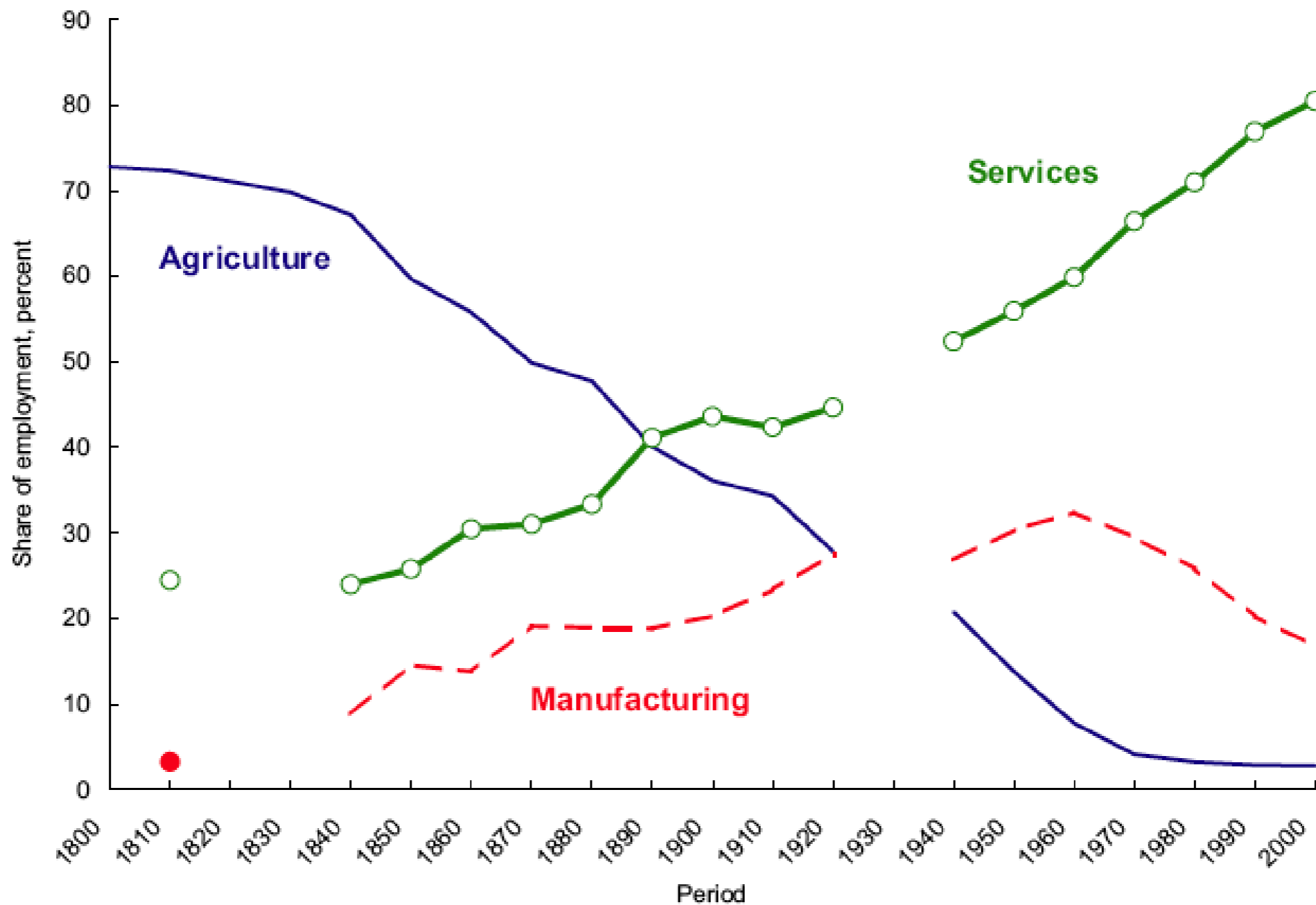
- Romer: Ideas can  
lead to growth  
acceleration





# The Productive Internet

# 1: Moving Services Online



Employment Shares by Sector, U.S., 1800-2000

Source: Iscan (2010)

# 1: Services

## Automating/Outsourcing

Zysman et al and the *Algorithmic Revolution*

Global spot markets for talent

“The division of labor is limited by the size of the market” - Adam Smith, 1776

# 2: “Local,” On-demand manufacturing



Crude personal fabricators now, but...



Original 1979 laser printer filled a room  
- the Xerox 9700

Online orders to local firms, lathes, delivery?

# 3: An Internet of Things

- Machines (including sensors) talking with machines
- IPV6
- Intelligent machines, or dumb machines with “smart cloud”? e.g. Wolfram Alpha, Dragon Dictate apps



# Challenges

# 4: Personalized Malware

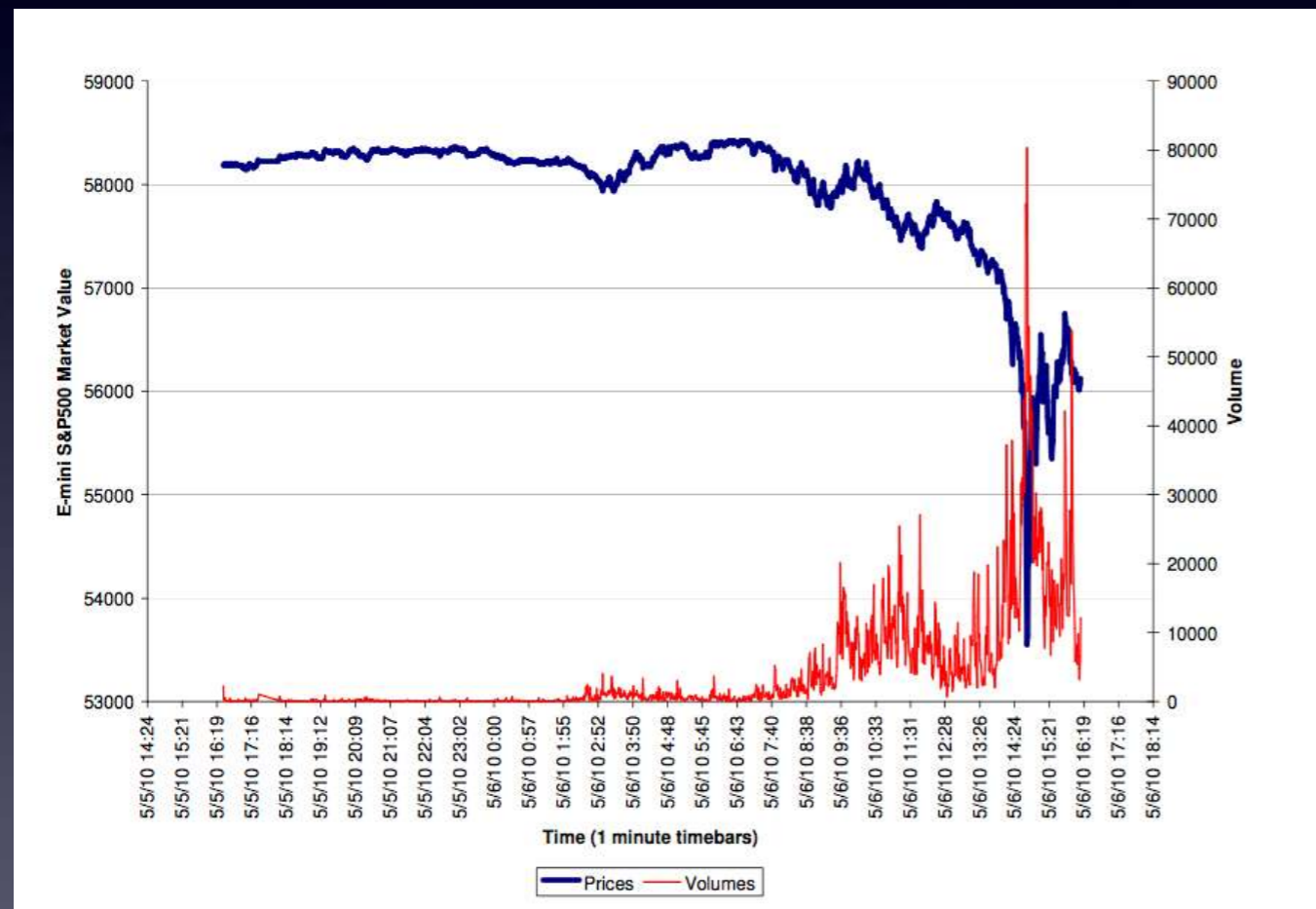
- Stux-Net virus that specifically varies (wildly) high speed electrical motors, typically used in uranium reprocessing centrifuges.



- Personalized attacks dramatically change the economics of malware

# 5: Flash Crashes & System Failures

High frequency Internet-enabled trading can have unanticipated consequences.

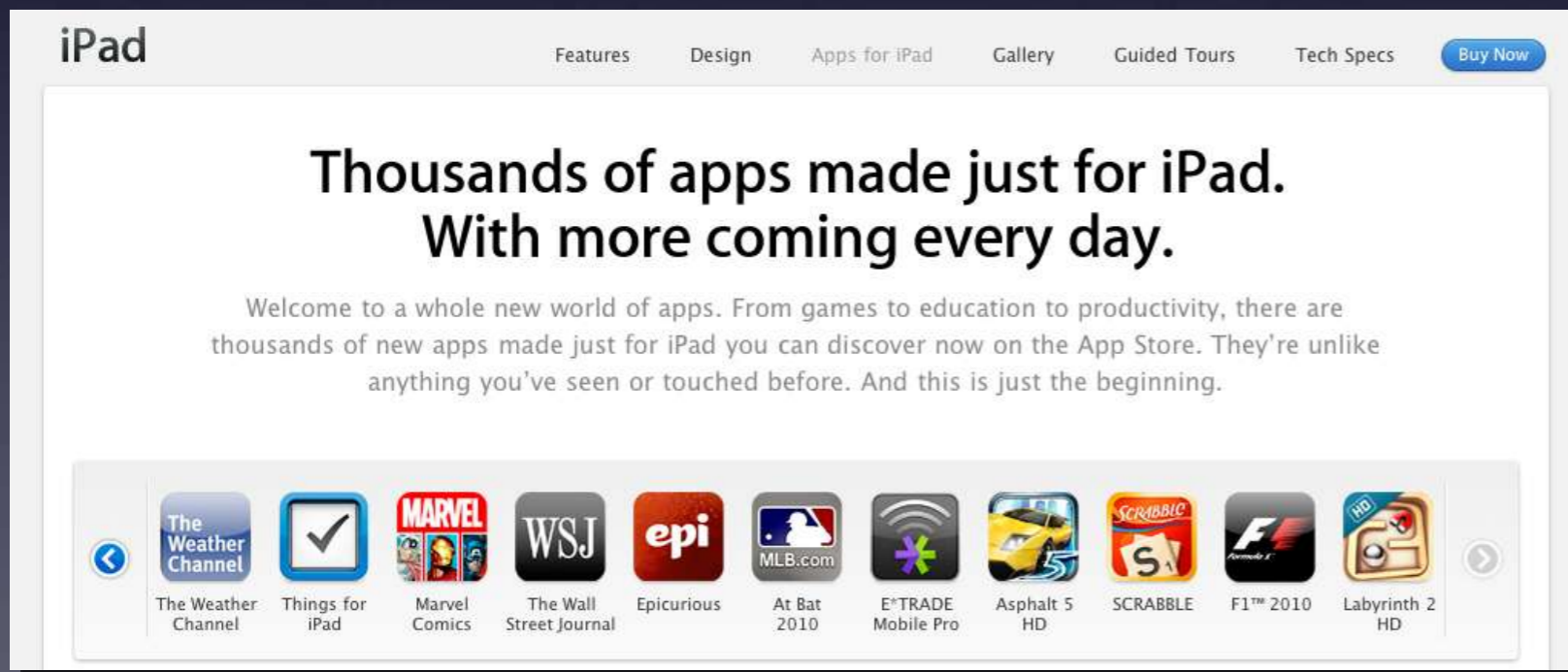


May 6, 2010 market lost \$1 trillion in value in 15 minutes. Closed roughly even for the day - but many lost (and made) millions in the process.

May 6, 2010 S&P 500 Futures

# 6: Accidental Monopolies

Platforms can arise very rapidly, with IP controls and effective market power.



Very real question whether regulators and Courts can move at Internet-enabled speeds.

# Surprises



in 7  
days!

# Surprising Constancy In Some Things

In 2040,

- Radio will still exist as a popular medium
- Human nature (for good and ill)
- Story telling will still drive content, many functional applications very similar

# Expect Surprises

- Out-of-the-blue new gadgets/services
- Suddenly collapsing or rejuvenated industries
- New scarcities

*Only through disruptive innovation can wealthy countries prosper in a global market*