

IT and Public Policy - Oct. 14, 2004

The Academic/Industrial Complex?

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Introduction

Patents + Grants

Two Puzzles:

Why Change The Grant System?
 Patents + Grants = DWL + Agency Problems?

Will We Change Academic R & D Priorities?
 ...and should we?

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Introduction

Overview

- Traditional Academic Incentives
- Academic Patenting
- The First Puzzle: DWL
- The Second Puzzle: Academic Priorities

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Academic Incentives

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Academic Incentives

A Puzzle from the Last Lecture
 Investing in the Unknowable

History

Carnegie, Rockefeller et al.

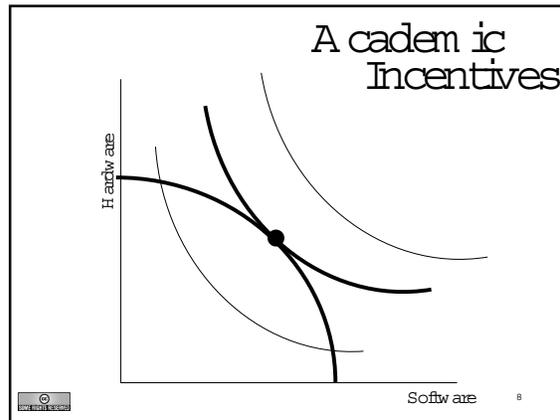
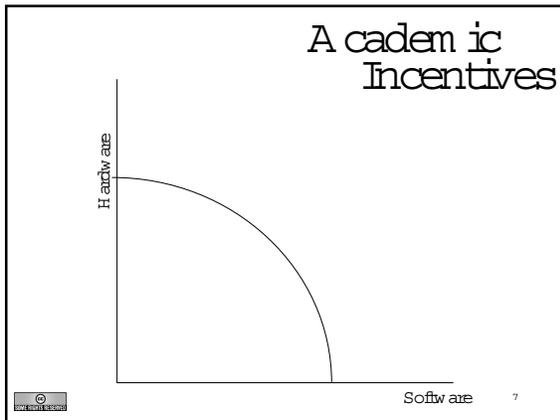
- Peer Review

NH & NSF
 Curiosity and Its Surrogates

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Academic Incentives

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Beyond Grants

Is It Optimal?

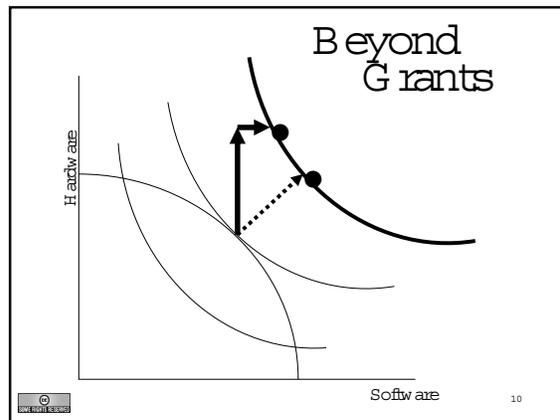
Beyond The Grant Model

- NASA & DoD.
- Licklider

Industry Participation

- Gifts, Affiliates Programs,
- Grants, ORUs.

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Beyond Grants

Basic Argument:

- More Curiosity-Driven Research

Caveats:

- Who Benefits Most?
- Tilting The R&D Mix
 - Basic vs. Applied
 - Long-Term vs. Short-Term
 - Government Responses
- Crowding Out?

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Beyond Grants

A Natural Extension (?)

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Academic Patents



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Academic Patents

Money is Different!

- Curiosity + Money
- Cashing Out Long Term R & D?
- Cashing Out Reputation?



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Pre-1980s

Academic Patents

Individuals

Consulting Patents
Left University to Form Businesses.

Universities

Harvard: No DWL from medical R&D
Berkeley: Profit Maximization
Wisconsin: Socially Responsible Investing
Stanford: Marketing Knowledge



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Academic Patents

Bayh-Dole (1980)

- Marketing Knowledge
- Incremental Improvements
- Not Money for Universities
- Not Increased R & D Incentives



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Academic Patents

Licensing Offices

- Growth of Patenting, Licensing, and Startups
- How Profitable Is Licensing?
- Income vs. Incentives
- The "Lottery Ticket" Dynamic



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Academic Patents

Academic Entrepreneurs

Staying in Academia
The 40% Solution
Money for Labs & Departments

Politics

An Iron Triangle?
Visible vs. Invisible Benefits



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The First Puzzle: DWL

1) Marketing

Time to Market

Survey Data

A Tax on Knowledge?

Pharmaceuticals

Tacit Knowledge

Is Consulting Enough?



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The First Puzzle: DWL

2) Incremental Improvements

Empirical Evidence

Why Not Patent Reform?



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The Second Puzzle: Priorities

Basic vs. Applied Research

Statistics vs. Anecdotes

The Future

"Changing the University"

Engines of Growth?

Is the Culture Changing?

Tenure



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The Second Puzzle: Priorities

A Silver Lining?

Understanding Market Needs

Side Effects

Hoarding Information

Conflicts of Interest



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Conclusions

More Study is Needed!

In Praise of Naïve Arguments

The Scottish Verdict - "Not Proved"



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