



NOTES DE CONFÉRENCES – DÉCEMBRE 2006

Chaire de Recherche du Canada en Mondialisation, Citoyenneté et Démocratie

<http://www.chaire-mcd.ca/>

CAPITAL, KNOWLEDGE AND POWER IN THE GLOBAL PHARMACEUTICAL BUSINESS;

STRUCTURAL COMPETITION FOR DIFFERENTIAL ACCUMULATION

Marc-André GAGNON

Chargé de cours à l'Université de Montréal et à l'UQAM, membre de la
Chaire MCD

*Ce texte constitue les notes d'une conférence prononcée par l'auteur pour le
CAFCA et présentée au colloque « Rethinking Capitalist Power » dans le
cadre du congrès « Rethinking Marxism ». University of Massachusetts in
Amherst, octobre 2006.*

Capital, Knowledge and Power in the Global Pharmaceutical Business;

Structural Competition for Differential Accumulation

By Marc-André Gagnon,
PhD Candidate, York University
Researcher for CAFCA, UQAM
mag@internet.uqam.ca

Outline:

Capital, Knowledge and Power in the Global Pharmaceutical Business; Structural Competition for Differential Accumulation

- Standard View on the Knowledge-Based Economy
- Power Theory of Capital
 - Veblen's Dichotomy Between Industry and Business
 - Bichler and Nitzan's Differential Accumulation
 - The Concept of Structural Competition
- The Global Pharmaceutical Business
 - Differential Accumulation in Pharmaceuticals
 - A Surge in Innovation?
 - Interpreting Breadth (Mergers and Acquisitions)
 - Interpreting Depth (Marketing and IPR)

The Standard View on the Knowledge-Based Economy

- «New Economy Thesis» (Cognitive Capitalism): Capital Accumulation relies more and more on new intangible sources of production and wealth, chiefly knowledge and intelligence. Accumulation regime based on creativity and permanent innovation.
 - Neoclassical Economics: New Growth Theories (Romer, Lucas, Mankiw)
 - Marxist Theory and Regulation: Cognitive Capitalism or General Intellect (Negri, Virno, Gorz, Matisse-Issys)
 - National Accounts: Intangible Assets (Lev, Sveiby)
 - Sociological Theory: Networks and Access (Rifkin, Castells)

Power Theory of Capital

Veblen's Contribution I: Dichotomy Business/Industry *(Theory of Business Enterprise; Absentee Ownership)*

-Industry is the technology shared by the community. The industry produces wealth and is inherently a societal process where every product embody the entire history of human knowledge. Production goods are only material means to put the social knowledge to use.

-Business (and economics) is about the creation of pecuniary value and the capture of earnings.

- Capital is a claim over putative earning-capacity, a claim not on the usufruct of the past but on future earnings. Capital is only financial capital.

- Business Earnings cannot be measured by Industrial Productivity. Earnings depend on the capacity to control the industry.

- Tangible assets are capitalized in terms of Sabotage capacity; Industry is an interdependent concatenated system, by capturing the strategic material means to put social knowledge to use, businessmen thus take the industry hostage and can reclaim a ransom according to its potential damage capacity.

- The bulk of any corporation's capitalization is made of intangible assets, which are any durable earning-capacity (due to any institutional setting, like habits of thought, legislations, monopoly power or state power).

Power Theory of Capital

Veblen's Contribution II: Accumulation and Power

(Theory of Business Enterprise; Absentee Ownership)

- Capital Accumulation is process of growing control of Businessmen over the Community by implementing institutions (habits of thought) serving the interests of businessmen, increasing their earning-capacity.
- In the words of Bichler and Nitzan, from this point of view accumulation of capital becomes accumulation of power. Capital is power expressed in monetary terms.
- Not only productive assets are capitalized, but any institutional reality (social, legal, political, cultural, technical) that can grant an earning capacity.
- But Veblen emphasizes the increasing control of the vested interests over the « common man » and doesn't analyze competition and power distribution between businessmen, which impeded him to provide a general theory of economic power.

Power Theory of Capital;

A General Theory of Capitalist Power: Bichler and Nitzan's Differential Accumulation

- Capitalism has to be analyzed as a whole social order, in which accumulation is not an offshoot of production, but, rather, the manifestation of a struggle over the shaping of the social process between dominant groups and the rest of society, as well as between those groups themselves.**
- Capitalized Earning-Capacity represents a claim, not for a share of the output, but for a share of control over the social process. Capital is the commodification of capitalist power and thus capital accumulation is an accumulation of power.**
- Power needs to be measured in differential terms. In the capitalist logic, the aim is not to maximize profit, it to maximize profits compared to others, it is to beat the average.**
- Capital Accumulation should thus be measured in differential terms (Differential accumulation) by comparing a group's (or corporation's) combined capitalization to that of an average unit of capital.**

Power Theory of Capital; **Structural Competition**

Capitalist Control can be direct: for example, the massive resort to advertising to manipulate desires and habits or the killing of competition through consolidation (M&A's).

Capitalist Control is mostly structural, it rests on social structures, institutions and habits of thought. (Microsoft's earning-capacity rests on the legitimacy of intellectual property in the public mind). Capitalist competition should be understood as a competition to produce and reproduce the institutional structures serving best the interests of dominant groups (eg: economic policies, protectionism, rules included in FTAs, margins of action for dominant groups, costs externalization, monopoly power etc.)

Competition becomes structural.

- Market Competition: Competition by lowering prices.
- Monopolistic Competition: Competition by differentiating products.
- Structural Competition: Competition by transforming institutional structures.

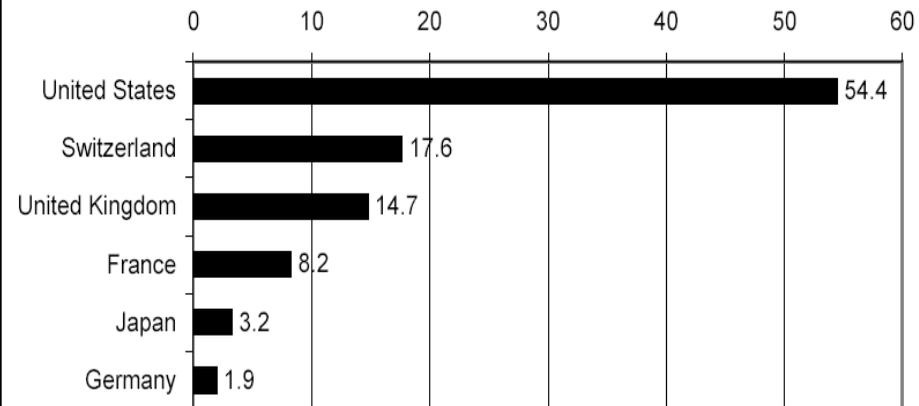
Structures of the Global Pharmaceutical Business:

List of Big Pharma Companies for 2006

Company	Country	Market Value	Revenues
1- Pfizer	US	183.4	51.3
2- Johnson and Johnson	US	176.2	50.5
3- GlaxoSmithKline	UK	151.9	37.8
4- Novartis	Switzerland	146	32.2
5- Roche	Switzerland	130.6	27.3
6- Sanofi-Aventis	France	128.6	33.1
7- Genentech	US	89.1	6.6
8- Amgen	US	86.2	12.4
9- AstraZeneca	UK	79.4	24
10- Merck	US	77	22
11- Abbott Laboratories	US	65.3	22.3
12- Wyeth	US	65.2	18.8
13- Eli Lilly	US	62.5	14.6
14- Takeda Pharmaceutical	Japan	50.6	9.6
15- Bristol-Myers-Squibb	US	48.2	19.2
16- Bayer	Germany	29.2	34

Source: FT Global 500

National Share of Global Capitalization for Big Pharma in 2005 (%)



Source: FT Global 500

US Share in World Pharmaceutical

Sales: 42%

R&D: 49%

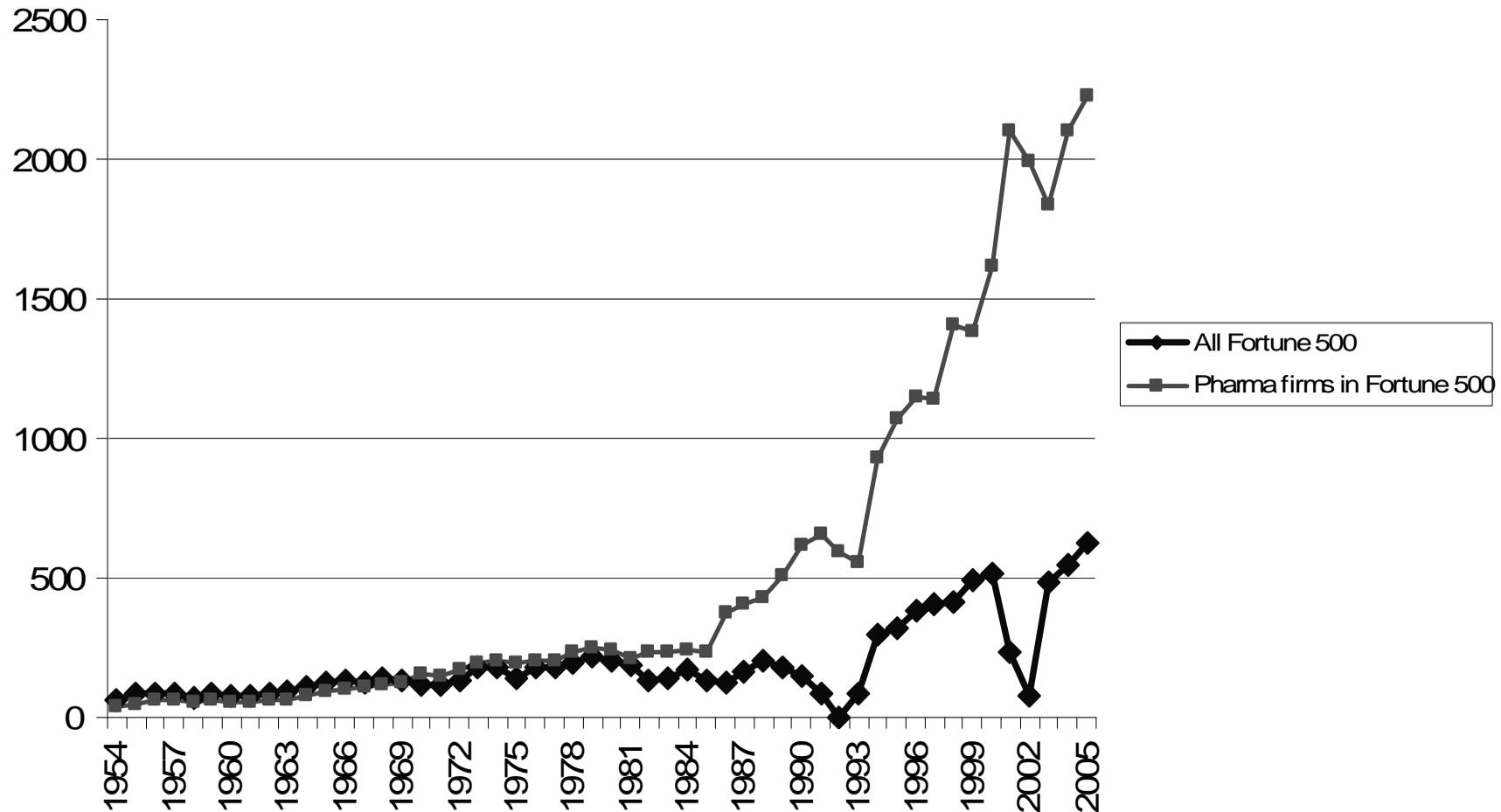
Production: 33%

Source: IMS, EFPIA, OECD Health Data.

Big Pharma Differential Accumulation;

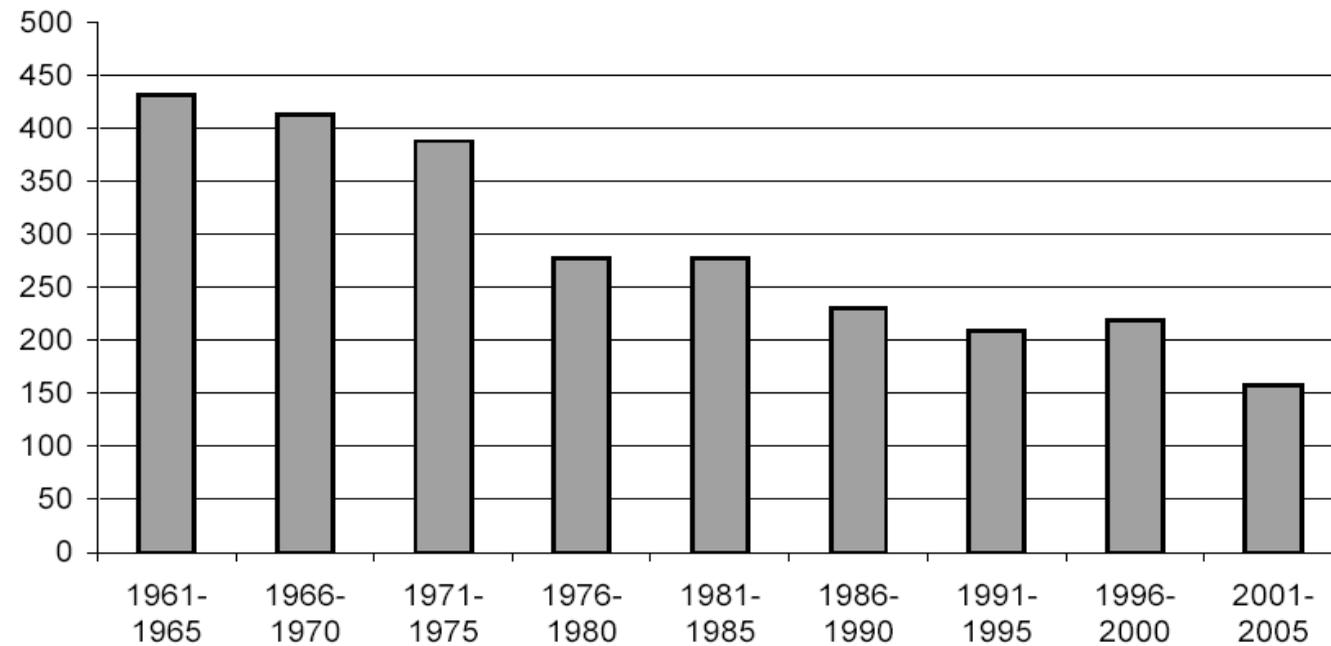
Profits of an average US dominant pharmaceutical firm as compared to an average Fortune 500 firm (1954-2005; in millions of constant 1984 US\$)

Source: Fortune



Are We Entering a New Era of Innovation?

Global Introductions of New Chemical Entities 1961-2005



Sources:

1961-1985: Erika Reis-Arndt (1987) cited in Redwood (1987)

1986-2003: IMS Lifecycle New Product Focus Database cited in Grabowski and Wang (2006)

2004-2005: IMS Lifecycle New Product Focus Database cited in IMS Health Canada (2006).

Breadth in Pharma Differential Accumulation

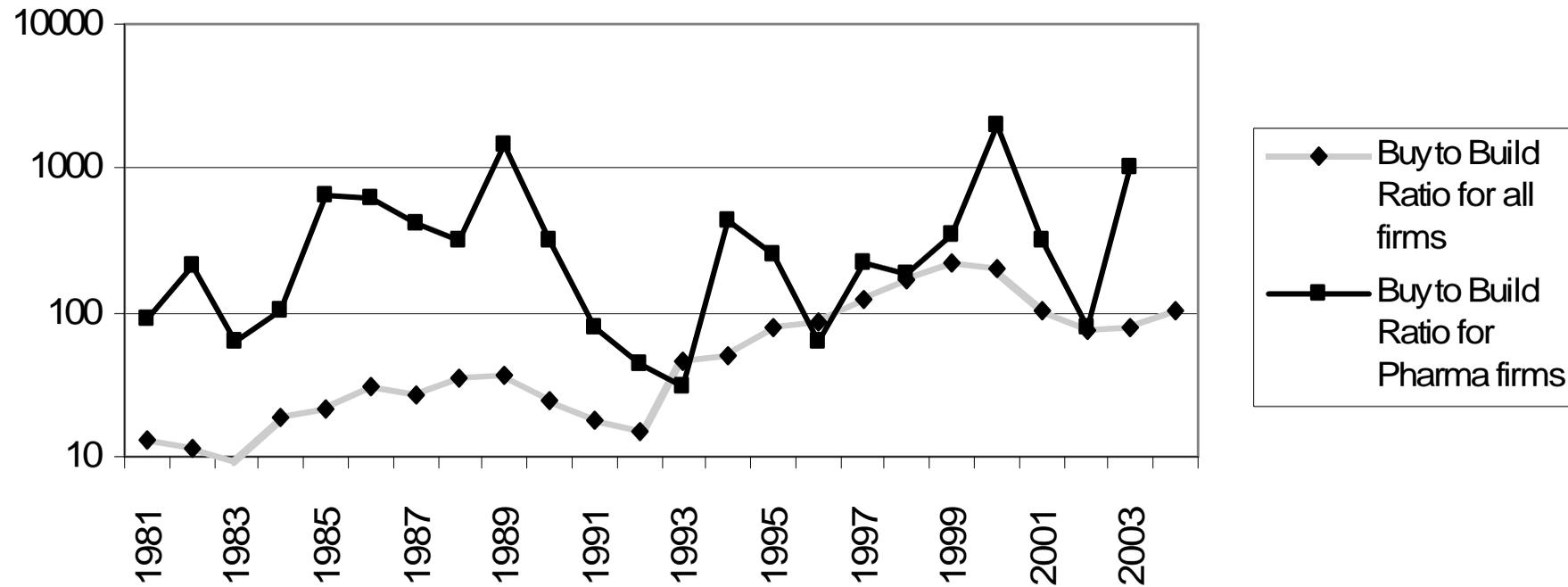
BUY-TO-BUILD RATIO

Mergers and Acquisitions in proportion to Gross Capital Formation for US
Pharmaceuticals and All US Sectors, 1981-2003 (log scale)

Sources: -Bichler and Nitzan (2002)

-for all sectors: BEA and Statistical Abstract of the United States

-for pharmaceuticals: OECD Health Data 2006, Thomson Financial



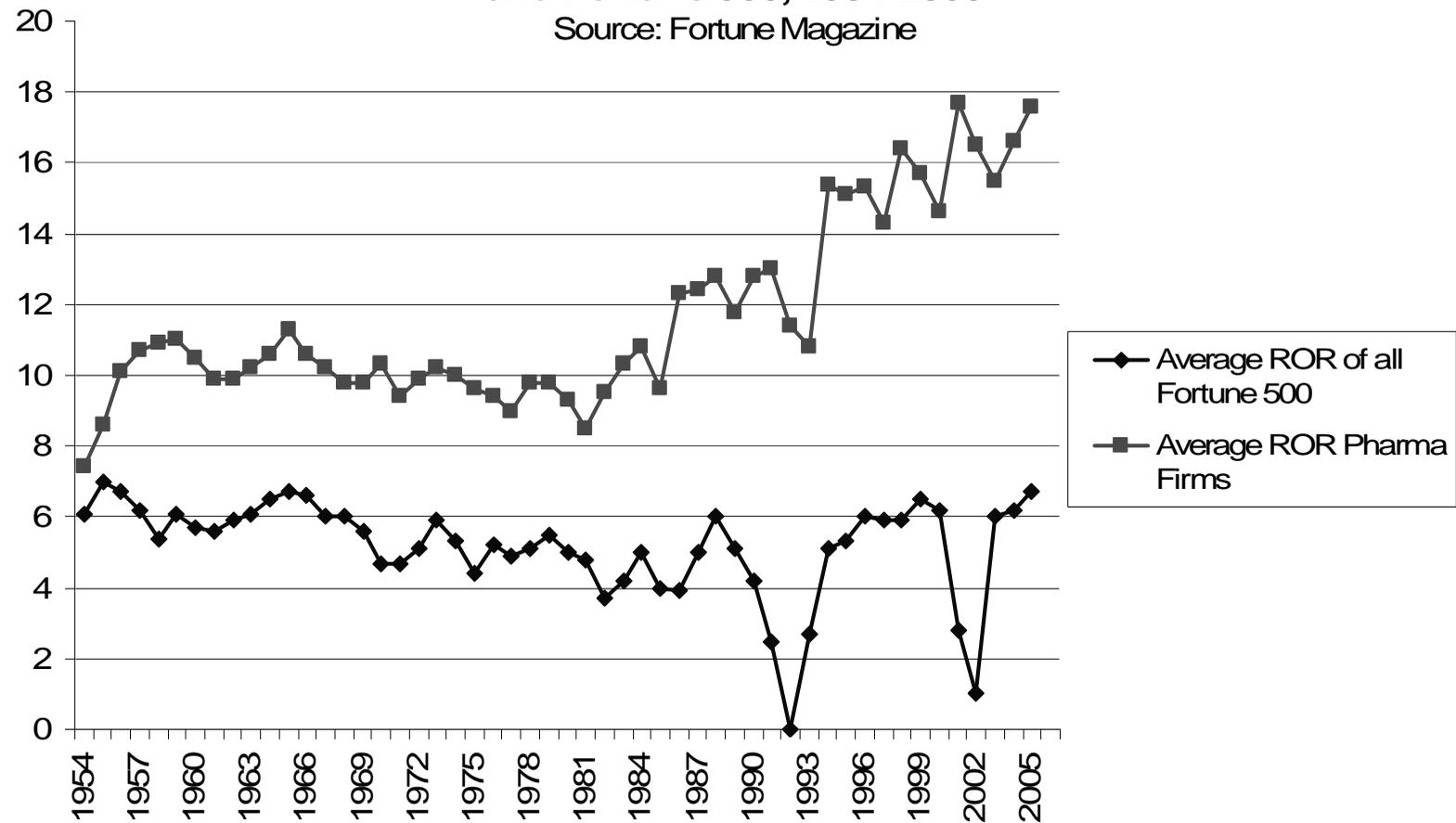
Breadth in Pharma Differential Accumulation: How to Interpret the Result

- Between 1981 and 2003, M&As represent 403% of Gross Fix Capital Formation for Pharmaceuticals; 67% for all firms (which is already historically very high).
- Growing Breadth due mostly to M&As explains in great part the Positive Differential Accumulation (positive power accumulation) by US pharmaceutical firms.
- What does it mean? Our suggested interpretation:
 - Movement of Consolidation between pharmaceutical firms in an era of globalization.
 - Important barriers to entry, newcomers needs alliance with Big Pharma:
 - Patent Thickets (Ownership of Basic Pharmaceutical Knowledge)
 - Prohibitive Prices of clinical trials
 - Control over distribution network through massive marketing (27% of sales; 65 000\$/doctor)
 - Pharmaceutical Innovation is not only the result of the corporate realm (Universities, National Research Centers, Public Subsidies) but since the Bayh-Dole Act in 1980, universities have a great incentive to patent their findings and create start-ups without any possibility to market their discovery without an alliance with Big Pharma.
 - Big Pharma are marketing machine that managed to externalize R&D in social networks of production and control the market by buying back any promising enterprise.

Depth in Pharma Differential Accumulation

**Differential Net Returns on Revenues (ROR) Between Big Pharm
and Fortune 500, 1954-2005**

Source: Fortune Magazine



Depth in Pharma Differential Accumulation: How to Interpret the Result?

- Returns on Revenues for all firms goes from 5 to 7% from 1981 to 2005 while for Big Pharma it goes from 8.5 to 17.5%.
- Establishment of a new Intellectual Property Rights Regime in the 1980s as a reaction to declining competitiveness in the United States (Revival of generics, U.S. World market share for pharma production from 35.1% in 1970 to 25.9% in 1980).
- Series of legislations to promote investments in R&D by increasing R&D profits:
 - Extension of intellectual Property Rights
 - Tax reductions for R&D
 - Restraining other countries from « Stealing from the American Mind ».

Selected Legislations Enabling higher returns on R&D

1980	Stevenson-Wydler Innovation Act; Bayh-Dole Act
1981	Economic Recovery Act
1982	Small Business Innovation Development Act; Court of Appeals for the Federal Circuit
1983	Orphan Drug Act
1984	National Cooperative Research Act; Drug Price Competition and Patent Term Restoration Act
1986	Federal Technology Transfer Act; Drug Export Amendments Act
1988	Omnibus Trade and Competitiveness Act (Special 301)
1993	National Cooperative Research and Production Act; North American Free Trade Agreement
1994	Agreement on Trade-Related Intellectual Property (TRIPs)

Conclusion

- Positive Differential Accumulation for dominant US Pharmaceutical Business means that they those groups are accumulating social power.
- The Differential Accumulation is the result of structural competition, re-shaping the social process to increase the earning-capacity of dominant firms.
- We saw that Big Pharma had important barriers to entry and that differential accumulation was due in terms of breadth and depth:
 - Breadth: M&A's are the main process to extend breadth. Barriers to entry allowed the possibility to externalize R&D where dominant firms buy back promising results from the social networks of production.
 - Depth: A series of new policies increased returns on R&D in the 1980s, by extending IPR, reducing taxes and restraining others from producing.
- Conclusion: The increasing power of dominant pharma group relies mostly:
 - on their capacity to restrain competition with great barriers to entry.
 - on structural transformations allowing the externalization of R&D costs.
 - on structural transformations increasing returns for IPR owners.