FINANCE AND DIFFERENTIAL ACCUMULATION IN THE GLOBAL PHARMACEUTICAL INDUSTRY

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The Nature of Capital in the Knowledge-Based Economy

Finance and
Differential Accumulation in the
Global Pharmaceutical Industry

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OUTLINE

• Usual Interpretations of Recent Economic Transformations
  - New Economy Thesis
  - Financialization Thesis

• The Productivity Bias; The Need of a Power Theory of Value
  - What is being accumulated?
  - Differential Accumulation

• An Illustration with Pharmaceuticals
  - New hypothesis
Structural Transformations in Advanced Capitalism: Knowledge or Finance?

1- «New Economy Thesis» (Cognitive Capitalism): Transformations are due to new intangible sources of production and wealth, chiefly knowledge and intelligence. Accumulation regime based on creativity and permanent innovation.  
(Rifkin, Castells, Matisse-Issys, Negri, Sveiby, Lev)

2- Financialization or «Shareholder Capitalism Thesis»: the rise of institutional investors created a new regime of growth where firms restructure the division of labour under new models of corporate governance to maximize shareholder value. Finance capital captures the real economy and operates a major income redistribution towards investors.  
(Aglietta, Plihon, Krippner, Henwood, Chesnais, Stanford)
The New Economy Thesis:
Intangible Assets as % of Tangible Assets
« Market-to-Book Value » for Dow Jones Industrial Average, 1920-2004
Source: Sveiby (1998), Data updated with Value Line
Financialization: Financial Capture of the Real Economy

"Jimbo Index"
Real vs Financial Assets in Canada (as a % of GDP), 1961-2004
Source: Jim Stanford (1999), Statistics Canada (table 380-0016) compiled by Eric Pineault
Hourly Productivity and Hourly Real Compensation per Worker for US Non-Farm Business Sectors Between 1947-2005 (1947=100)

Source: Bureau of Labor Statistics
The Elite takes all


Source: Congressional Budget Office, Effective Tax Rates (Various years)
Problem for both interpretations: Productivity Bias
- Conceit that there is a « real » economy, producing real wealth to which correspond economic values.
- Capital accumulation remains an accumulation of wealth, of useful commodities produced in the past.

Thorstein Veblen’s alternative: dichotomy between Business and Industry
(Theory of Business Enterprise; Absentee Ownership)

- The industry (shared technology by the community) that produces wealth is inherently a societal process where every product embody the entire history of human knowledge.
- 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.
- The corporation is a better form of economic organization to maximize earnings, not by maximizing production but by maximizing the control over productive capacities.
- Tangible assets are capitalized in terms of Sabotage capacity; Businessmen thus take the industry hostage and can reclaim a ransom.
- The bulk of any corporation’s capitalization is made of intangible assets, which are any durable earning-capacity (due to any institutional setting, like conventions or state power).
Shimson Bichler and Jonathan 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 capitalist power.

- Power needs to be measured in differential terms. In the capitalist logic, it is not about the search for maximum profit, it is the search 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.
Pharmaceutical Firms among the Global 500 biggest firms in terms of market value
Source: Global 500, Financial Times May 2005

<table>
<thead>
<tr>
<th>Global Rank</th>
<th>Pharmaceutical Firms</th>
<th>Country</th>
<th>Market Value (US SM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Johnson &amp; Johnson</td>
<td>US</td>
<td>199,711</td>
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<tr>
<td>9</td>
<td>Pfizer</td>
<td>US</td>
<td>195,944</td>
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<tr>
<td>19</td>
<td>GlaxoSmithKline</td>
<td>UK</td>
<td>134,123</td>
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<td>23</td>
<td>Novartis</td>
<td>Switzerland</td>
<td>124,61</td>
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<td>26</td>
<td>Sanofi-Aventis</td>
<td>France</td>
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<td>34</td>
<td>Roche</td>
<td>Switzerland</td>
<td>95,779</td>
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<td>51</td>
<td>Amgen</td>
<td>US</td>
<td>72,92</td>
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<tr>
<td>53</td>
<td>Abbott Laboratories</td>
<td>US</td>
<td>72,677</td>
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<td>55</td>
<td>Merck</td>
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<td>AstraZeneca</td>
<td>UK</td>
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<td>77</td>
<td>Genentech</td>
<td>US</td>
<td>59,231</td>
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<td>78</td>
<td>Eli Lilly</td>
<td>US</td>
<td>59,014</td>
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<td>85</td>
<td>Wyeth</td>
<td>US</td>
<td>56,354</td>
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<td>102</td>
<td>Bristol-Myers Squibb</td>
<td>US</td>
<td>49,692</td>
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<td>125</td>
<td>Takeda Pharmaceutical</td>
<td>Japan</td>
<td>42,484</td>
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<td>209</td>
<td>Schering-Plough</td>
<td>US</td>
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<td>235</td>
<td>Bayer</td>
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<td>301</td>
<td>Teva Pharmaceutical Industries</td>
<td>Israel</td>
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<td>356</td>
<td>Novo Nordisk</td>
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<td>493</td>
<td>Schering</td>
<td>Germany</td>
<td>12,902</td>
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US World Market Share in Pharma:
Sales: 48%
Production: 29%
R&D: 49%
Source: IMS, EFPIA, OECD Health Data
**Big Pharma Differential Accumulation;**

Profits of an average US pharmaceutical firm as compared to an average firm in the Fortune 500 (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

1986-2005: IMS Lifecycle New Product Focus Database
Breadth in Differential Accumulation
BUY-TO-BUILD RATIO
Source: -Bichler and Nitzan (2002)
-for all sectors: BEA and Statistical Abstract of the United States
-for pharmaceuticals: OECD Health Data, Thomson Financial
Depth in Differential Accumulation

Differential Returns on Revenues (ROR) Between Big Pharma and Fortune 500, 1954-2005
Source: Fortune Magazine

Average ROR of all Fortune 500
Average ROR Pharma Firms
CONCLUSION:

New economy Thesis and the Financialization Thesis are unable to account for structural transformations in the Global Pharmaceutical Business. By considering capital in terms of power, of control over society, the differential accumulation analytical framework opens the way to new hypothesis:

- Structural Competition: Dominant Capitalist groups compete by transforming willingly the socio-economic institutional settings to increase their strategic control over the industry and society.
- M&As are a result of externalizing R&D where dominant firms simply buy back promising results by smaller firms or universities (Bayh-Dole Act in 1980).
- Differential ROR could maybe be explained by the extension of intellectual property rights resulting from the activism of American pharmaceutical companies (especially Pfizer).