Tomorrow's Capitalism:

GROWTH AFTER THE FINANCIAL CRISIS

Carlota Perez

Universities of Cambridge and Sussex, UK and Technological University of Tallinn, Estonia

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THE CURRENT CRISIS IS NOT AN ACCIDENTAL EVENT IN THE FINANCIAL SYSTEM

- It is a historically recurrent phenomenon
- It is endogenous to the market system
- It results from the way technical change is assimilated

THE COLLAPSE MARKS A STRUCTURAL SHIFT IN THE ALIGNMENT OF FORCES GUIDING GROWTH AND INNOVATION

If history is a guide... A GLOBAL GOLDEN AGE MAY LIE AHEAD
WHAT IS THE BASIS FOR MAKING those statements?

The regular historical patterns of diffusion and assimilation of technological revolutions in the economy and society
The analysis of how technological revolutions are assimilated shows powerful regularities and identifiable specificities.

**HISTORICAL REGULARITIES**

- A technological revolution comes together every 40 or 60 years (at maturity of the previous)
- Each drives a great surge of development broken in two different periods one led by finance, the other by production
- A major financial collapse marks the beginning of the switch

**EPOCHAL SPECIFICITIES**

- Each revolution provides a different potential for growth with different leading industries
- Each brings a paradigm shift in the criteria for innovation and competitiveness
- The institutional context and the policy decisions define what part of the new potential will be deployed and how

Each great surge is unique due to historical, political and other contingent factors.
But the recurring patterns have a fundamental causal explanation.
The Theory of Great Surges of Development
(Schumpeterian up to a point)

Technical change in the market system is constant but not continuous.

Capitalism is revitalised by successive technological revolutions:

- Widening and deepening market reach
- Raising the potential productivity levels
- Incorporating new social groups to social and economic progress (while leaving others out) and
- Encompassing greater and greater parts of the globe

The focus is on the interplay between technology, the economy and social institutions.

It is a complementary theory that describes and explains the way technical change drives and shapes long-term growth and provides a context for other levels of analysis.
FIVE GREAT SURGES OF DEVELOPMENT IN 240 YEARS

driven by successive technological revolutions

Spreading from core country

Britain 1771 The ‘Industrial Revolution’ (machines, factories and canals)

Britain 1829 Age of Steam, Coal, Iron and Railways

Britain 1875 Age of Steel and Heavy Engineering (electrical, chemical, civil, naval)

USA 1875 Age of Steel and Heavy Engineering (electrical, chemical, civil, naval)

USA 1908 Age of the Automobile, Oil, Petrochemicals and Mass Production

USA 1971 Age of Information Technology and Telecommunications

USA? Europe? Both? Other? 20?? Age of Biotech, Nanotech, Bioelectronics and new materials?
Why call them revolutions?
Because they transform the whole economy!

NEW INDUSTRIES

A powerful cluster of visible interdependent new and dynamic industries and infrastructures

EXPLOSIVE GROWTH AND STRUCTURAL CHANGE

NEW PARADIGM FOR ALL

New multi-purpose technologies, infrastructures and organisational principles capable of modernising the existing industries too

A QUANTUM JUMP IN INNOVATION AND PRODUCTIVITY POTENTIAL FOR ALL

A MASSIVE CHANGE IN THE DIRECTION OF CHANGE

TRANSFORMING THE OPPORTUNITY SPACE AND THE WAYS OF LIVING, WORKING AND COMMUNICATING
Some well-known aspects of the paradigm shift taking place since the 1970s

MASS PRODUCTION → FLEXIBLE PRODUCTION
CLOSED PYRAMIDS → OPEN NETWORKS
STABLE Routines → CONTINUOUS IMPROVEMENT
HUMAN RESOURCES → HUMAN CAPITAL
FIXED PLANS → FLEXIBLE STRATEGIES
INTERNATIONALISATION → GLOBALISATION
THREE TIER MARKETS → HIGHLY SEGMENTED MARKETS

A radical change in best practice ‘common sense’
Due to the difficulty of social absorption of revolutions and new paradigms, each great surge is broken into two different periods.

**INSTALLATION PERIOD**

- 20 - 30 years
- "Creative destruction"
  - Battle of the new paradigm against the old
  - Concentration of investment in new-tech
  - Income polarisation
- Led by financial capital
- From irruption to bubble collapse

**DEPLOYMENT PERIOD**

- 20 - 30 years
- "Creative construction"
  - Widespread application of the new paradigm for innovation and growth across the economy
  - Spreading of social benefits
- Led by production capital
- From "golden age" to maturity

**GESTATION**

- Next big-bang
- Next Installation period

**BIG-BANG**

- Collapse
- We are here

**DESTRUCTION**

- Turning Point
- ???
Why this pattern? Why the role switch?

The dynamics of the capitalist economy is shaped by two different and functionally separate profit-seeking agents.

- **Production Capital**: Agent for accumulating wealth-making capacity
  - Flexible and mobile
  - Short-term bias
  - Entrepreneurs and managers in the production and distribution of goods and non-financial services
- **Financial Capital**: Agent for reallocating and redistributing wealth
  - Fixed and knowledge-bound
  - Long-term bias
  - Investors, their banks and all financial intermediaries

Financial capital can massively redirect resources and “force” new paradigm diffusion.

Production capital is better for carrying growth and expansion within an established paradigm.
The new engines of growth are ready to lead the expansion

The State must come back actively to change the playing field

Financial capital breaks loose
backs the new entrepreneurs
and uses the new technologies to innovate in finance

AFTER THE MAJOR BUBBLE COLLAPSE
FINANCIAL CAPITAL BECOMES
AN OBSTACLE TO THE REAL ECONOMY

The new engines of growth are ready to lead the expansion
The State must come back actively to change the playing field
The historical record: bubble prosperities, recessions and golden ages

<table>
<thead>
<tr>
<th>Golden Age</th>
<th>Installation Period</th>
<th>Turning Point</th>
<th>Deployment Period</th>
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<tbody>
<tr>
<td>1st</td>
<td>1771 - The Industrial Revolution Britain</td>
<td>Canal mania 1793–97</td>
<td>“Golden Age” Great British leap</td>
</tr>
<tr>
<td>2nd</td>
<td>1829 - Age of Steam and Railways Britain</td>
<td>Railway mania 1848–50</td>
<td>The Victorian Boom</td>
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<tr>
<td>3rd</td>
<td>1875 - Age of Steel and heavy Engineering Britain / USA Germany</td>
<td>London funded global market infrastructure build-up (Argentina, Australia, USA) 1890–95</td>
<td>Belle Époque (Europe) “Progressive Era” (USA)</td>
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<tr>
<td>4th</td>
<td>1908 - Age of Oil, Autos and Mass Production / USA</td>
<td>The roaring twenties Autos, housing, radio, aviation, electricity</td>
<td>Europe 1929–33 USA 1929–43 Post-war Golden age</td>
</tr>
<tr>
<td>5th</td>
<td>1971 - The ICT Revolution USA</td>
<td>Emerging markets dot.com and Internet mania financial casino 2000/07 -???</td>
<td>Sustainable global knowledge-society “golden age”?</td>
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Each Golden Age has been facilitated by enabling regulation and by policies for widening markets and insuring social stability.
THIS TIME THE MID-SURGE BUBBLE HAPPENED IN TWO STAGES

<table>
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<th>FIRST</th>
<th>SECOND</th>
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<td>Technological innovation</td>
<td>Financial innovation</td>
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<tr>
<td>The INTERNET MANIA in the 1990s</td>
<td>The EASY CREDIT BOOM in the 2000s</td>
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<tr>
<td>NASDAQ collapse in 2000</td>
<td>FINANCIAL MELTDOWN in 2007-08</td>
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SO WE ARE NOT FACING A MERE FINANCIAL CRISIS BUT A STRUCTURAL SHIFT

Understanding this is crucial for finding effective solutions to the current crisis
TWO VERY DIFFERENT BUT INTERCONNECTED BUBBLES

1990s NASDAQ Boom ≠ 2000s Easy-Liquidity Boom

Market capitalisation of financial and technology stocks
US 1991-2008

Source: Thomson

The identification of the mechanisms that led to the casino will help regulate against repetition
BUT ONLY AN UNDERSTANDING OF THE NATURE OF THE PHENOMENON CAN GUIDE POLICY FOR GLOBAL ECONOMIC RECOVERY
A SOLUTION IN THREE STEPS

Step one: Intensive therapy
Step two: Redesign financial architecture
Step three: Enable structural shift

They all require institutional innovation but the first two will only be successful if they are geared to facilitating the third
The structural shift involves

A SHIFT IN THE DRIVERS OF INNOVATION

INSTALLATION

THE STATE in a facilitating service role

FINANCE and THE NEW ENTREPRENEURS as drivers and innovators

DEPLOYMENT

FINANCE in a facilitating service role

PRODUCTION and THE STATE as drivers and innovators

The conditions for innovation in production will depend on the effectiveness of innovation in policies.
Different periods: different role of the State

**Installation**
**THE “GILDED AGE”**

The unrestrained market does it all

**THE GOOD:**
- Revive wealth creation
- Install the new industries
- Reward the innovators
- Overinvest in infrastructures
- Select the leaders

**THE BAD:**
- Skewed growth; polarised incomes
- Primacy of paper values over real ones
- Greed, corruption, short-termism
- Breakdown of collective values

**Deployment**
**THE “GOLDEN AGE”**

Intelligent come-back of the State

**THE GOOD:**
- PROMOTE LONG TERM GROWTH
- Regulate to restrain financial excesses
- Avoid monopolies; facilitate oligopolies
- Restore real values over paper ones
- Favour long-term investment in production
- Facilitate dense fabric of SMEs & KIBS

**THE BAD:**
- RE-ESTABLISH SOCIAL COHESION
- Income distribution
- Social safety nets
- Expansion and stability of demand
- Restoring collective values

INSTABILITY AND EXCLUSION
STABILITY AND INCLUSION
# A Shift in the Dynamics of Growth and Innovation

## Context

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<th>Gilded Age Installation</th>
<th>Golden Age Deployment</th>
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<td><strong>SUPPLY PUSH</strong></td>
<td><strong>DEMAND PULL</strong></td>
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### Mature Industries
- Technologically exhausted
- Markets saturated
- Old economy stagnates
- New technologies incipient

### SOURCE OF DYNAMISM?
- Ample finance for massive investment and innovation in new technologies, industries, and infrastructures competing to select new engines of growth and to rejuvenate the rest

### Times of Turbulent Growth and Income Polarisation

### Context
- The new engines of growth are ready
- New infrastructure widens and deepens market access
- Old industries rejuvenated
- New paradigm learned

### A huge potential for growth is installed

### SOURCE OF DYNAMISM?
- Expansion of demand (public and private) and reshaping of its profile (direct or indirect income redistribution) to enable production growth and constant innovation

### Times of Build-Out, Stable Growth and Increasing Social Wellbeing
FOUR CRUCIAL OUTCOMES WILL DEPEND ON ADEQUATE INSTITUTIONAL INNOVATION:

1. Whether finance abandons the casino and concentrates on financing production

2. Whether the context is clearly favourable to production innovation and expansion

3. Whether society fully benefits from the potential of the new technologies (full employment and well being)

4. Whether widespread production globalisation replaces trade and finance globalisation

CRITERIA FOR “ADEQUATE”?

Consistent with the paradigm
Positive sum-game between business and society
AN ENORMOUS TECHNOLOGICAL POTENTIAL
FOR HIGHLY PROFITABLE INNOVATION AND EXPANSION
IS ALREADY INSTALLED

It stems from the power of the technologies and infrastructure of the information revolution and its techno-economic paradigm.

It is enough for healthy growth in the OECD countries and extensive growth across the whole developing world (guaranteeing increasing markets for each other).

It is equivalent to the potential that drove the Post-War Golden Age but on a global scale.

BUT IT HAS TO BE GUIDED
BY GOVERNMENTS, BUSINESS AND SOCIETY
SOCIO- AND GEO-POLITICAL FORCES SHAPE THE DIRECTION

Technology and profitability set the space of the possible

Mass production

- Cheap energy, materials and transport
- Suburbanisation
- Electrification
- Recent World War/Cold War
- Abundant energy and materials

Flexible production (ICT)

- Cheap information processing and transmission
- Globalisation/Emerging countries
- Informatisation
- Climate change/ “New wars”
- Limits to energy and materials

HOMOGENISATION
- The American Way of Life
- Welfare State: workers as “middle class”
- International core and periphery

VARIETY ON A COMMON BASE
- Sustainable “glocal” lifestyles
- “Equivalent satisfaction”
- Increasingly global growth and well being
UTOPIAN OR REALISTIC?

It sounded utopian to say in mid-1930s DEPRESSION:

Blue collar workers will have lifetime jobs and fully equipped suburban houses with a car at the door.

Most colonies will gain independence.

...or in the late 1960s:

Some of the values of the hippie movement [back to natural materials, organic food, etc.] will become the luxury norms.

But it was realistic:

Increasing wages created many more millions of consumers for mass production and sustained growth.

Rising middle classes in the developing world adopted the “American Way of Life” widening world markets for mass production.

Innovations in natural textile fibres have transformed the world of fashion.

Innovation in distribution logistics have made organic foods the premium segment in supermarkets.

Shifts in consumption patterns shift profit-making opportunities.
In terms of options for the distribution of wealth creation and of its fruits, each paradigm defines the wide range of the viable.
Each paradigm shift transforms the political spectrum

Different essential values and goals remain, but the effective methods for attaining them vary with paradigm shifts.

SUCCESS IN THE NEW POLITICAL ARENA IS MORE LIKELY WHEN LOOKING FORWARD.
Aiming for the best of possible outcomes will require an understanding of the opportunity space and massive doses of imagination.
Thank you!