CAPITALISM, TECHNOLOGY AND A GREEN GLOBAL GOLDEN AGE:
The Role of History in Helping to Shape the Future

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Are environmental policies an obstacle to growth?
Is growth an obstacle to environmental sustainability?

With a historical understanding of innovation the answer to both is NO
Based on the history of technological revolutions we can argue that:

The environmental problems can be turned into the solutions for growth and well being
THE HISTORICAL RECORD:  
Bubble prospects, recessions and golden ages

<table>
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<th>No., date, revolution, core country</th>
<th>INSTALLATION PERIOD</th>
<th>Bubble prosperity</th>
<th>TURNING POINT</th>
<th>'Golden Age' prosperity</th>
<th>DEPLOYMENT PERIOD</th>
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<td>1771 The Industrial Revolution Britain</td>
<td>Canal mania</td>
<td>1793-97</td>
<td>Great British leap</td>
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<td>1829 Age of Steam and Railways Britain</td>
<td>Railway mania</td>
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<td>1875 Age of Steel and heavy Engineering Britain / USA Germany</td>
<td>London funded global market infrastructure build-up (Argentina, Australia, USA)</td>
<td>1890-95</td>
<td>Belle Époque (Europe) 'Progressive Era' (USA)</td>
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<td>1908 Age of Oil, Autos and Mass Production / USA</td>
<td>The roaring twenties Autos, housing, radio, aviation, electricity</td>
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<td>Post-war</td>
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Led by finance with unfettered markets  
We are here  
Led by production guided by the State

The equivalent historical period for the diffusion of the ICT revolution is the 1930s

WHAT IS THE NATURE OF THE TURNING POINT?

Once the bubble collapses  
the underlying state of the economy is revealed

- Finance has become a casino, decoupled from production
- All investment looks uncertain
- No clear market signals
- Deflation, unemployment
- Income is polarised, inequality is stubborn
- Social unrest, xenophobia, messianic leaders
- Economic migrations
- Talk of secular stagnation and structural unemployment
- Recessions, or feeble growth (even depression)

YET THERE IS A HUGE TECHNOLOGICAL POTENTIAL INSTALLED BY THE BUBBLES

WHAT IT LACKS IS A STABLE SYNERGISTIC DIRECTION
HOW DID POLICY IN THE POST WAR BOOM OVERCOME THE 1930s?

Apart from the Keynesian management of fiscal and monetary policy

THERE WAS MASSIVE SHAPING OF DYNAMIC DEMAND FOR MASS PRODUCTION:

• Infrastructure for low-cost suburban housing
• Government guarantees for mortgages
• Unemployment insurance and pensions
• Official labour unions (to maintain salary increases)
• Free education for the majorities (and sometimes also health)
• Farm subsidies (prices low for consumers and profits high for equipment)
• Military procurement
• Massive government employment and high taxes to pay for it
• And the Breton Woods institutions for international finance and trade

All that provided demand with two clear directions for innovation:

THE NEW SUBURBAN LIFESTYLE AND THE COLD WAR

with an adequate and effective role for the state

The best precondition for successful policy is understanding the context being faced

WHY DID KEYNES WORK THEN?

National economies with mass production and consumption of identical products (made and used with cheap oil and materials) mainly for the domestic market with stable incomes from life-time jobs

WHAT ARE WE FACING NOW?

Globalised economies (WTO watching) with flexible production geared to diversified (global) markets, with potentially expensive energy and materials in a context of rapid innovation and unstable changing jobs

We need to keep the aims of Keynes while adding a Schumpeterian understanding and design a new policy framework for dynamic innovation and markets in the information age
What could the new directions be?
GREEN GROWTH AND FULL GLOBAL DEVELOPMENT

‘Green growth’ = A constant increase in the proportion of intangibles in GDP and lifestyles (while improving the life of the great majorities)

- Favouring renewable energy vs. fossil fuel
- Favouring services rather than products
- Drastic reduction of waste, massive increase in reuse and recycling
- Making durable products truly durable and shifting to a rental model
- Seriously reintroducing maintenance (with 3D printing of parts)
- Accent on preventive health, exercise, creativity and experiences
- And so on…

Why is ‘full global development’ in the interest of the advanced world?

- It would provide demand for advanced country specialisation:
- It would multiply trade flows (less concentrated in China and Asia)
- It would reduce poverty, violence and, therefore, migrations
- And so on…

WE NEED TWO SETS OF POLICIES

CHANGE THE CONTEXT
MODERNISE GOVERNMENT

Stimulating dynamic demand for innovation and investment
And enabling government to handle the new context creatively
SOME IDEAS TO CONSIDER FOR CHANGING THE CONTEXT:

- Change tax on capital gains to favour long-term investment
- Tilt the playing field in favour of energy and materials saving
- Tax energy, materials and transport (not labour)
- Regulate for durability and maintenance
- Tax products and purchasing, not services and rental
- Facilitate the sharing and collaborative economy
- Set up flexicurity and/or basic income
- Set up a ‘new-new deal’ about education, skilling an reskilling
- Invest in the new infrastructures (charging for electric cars, smart grids, FTTH, etc.)
- New ‘Marshall Plan’ for the lagging countries
- Supranational arrangements for global taxes
- And so on…

THE CHANGES NEED TO BE AS BOLD AND IMAGINATIVE AS BRETTON WOODS AND THE WELFARE STATE

SOME ASPECTS OF THE MODERNISATION OF GOVERNMENT:

- New institutional arrangements for consensus design of strategy and policy
- Put the general direction of innovation at the centre of growth policy
- Strengthen capabilities and organisations towards creative, flexible, agile and knowledgeable government
- Maximise devolution to empower local and city governments and encourage local strategies
- Digitise and make simple citizen participation and public services
- Participate in shaping (and accepting) supra-national institutions with enforcing power
- And so on…
The longer we delay abandoning austerity and bringing the State back proactively...

...the longer the stagnation or the feeble jobless growth are likely to last