Introduction to Post-growth Economics

1\textsuperscript{st} European River Summit
Sarajevo, 28\textsuperscript{th} September 2018
Niko Paech
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<td>Climate protection: Green growth or degrowth?</td>
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Climate change is the most significant limit to growth

Temperature Anomaly (°C)
(Difference from 1880-2015 annual mean)

http://earthobservatory.nasa.gov/IOTD/view.php?id=88607&eocn=home&eoci=iotd_title
What is sustainability? Social justice within ecological limits!

- Meeting the 2 degrees celsius climate protection target
- Global budget: 750 billion tons of CO$_2$ until 2050
- 7.3 billion people $\Rightarrow$ 2.5 tons of CO$_2$ per capita p.a.

How much materialized freedom and self fulfillment may an individual claim without living beyond his or her ecological and social means?
Sustainability and growth: Two different perspectives

**Green growth**

*Thesis:* Permanent economic growth is possible and can be dematerialized by technological and service innovations

- Efficiency, Consistency
- Distribution of growth

**Post-growth**

*Thesis:* Permanent economic growth is not possible and cannot be dematerialized by technological progress

- Sufficiency, Slowing down
- Redistribution, Zero sum game

**Technological Change**

Satisfying demand by ecological optimized hardware and production

**Cultural Change**

Putting the demand as such in question; new forms of subsistency
The german „Energiewende“ completely failed

Primary energy consumption
Germany 2017

Quelle: Arbeitsgemeinschaft Energiebilanzen
Significant CO₂ reductions were caused by degrowth effects

Not technological innovations but shrinkings of industrial production turns out to protect the climate.
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<th>Older points of view against growth</th>
<th>New and current concepts of degrowth</th>
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<tr>
<td>1. Is permanent growth possible?</td>
<td>4. Is degrowth possible?</td>
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<tr>
<td>- Quesnay (1758)</td>
<td>- Gronemeyer (1988)</td>
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<td>- Malthus (1798)</td>
<td>- Neirynck (1992)</td>
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<td>- Mill (1848)</td>
<td>- Sachs (1992)</td>
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<td>- Keynes (1941)</td>
<td>- Pallante (2005)</td>
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<td>- Erhard (1957)</td>
<td>- Layard (2005)</td>
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<td>- Kohr (1957)</td>
<td>- Paech (2005, 2012)</td>
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<td>- Meadows (1972)</td>
<td>- Martinez-Alliez (2009)</td>
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<td>- Schumacher (1973)</td>
<td>- Jackson (2009)</td>
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<td>- Illich (1973)</td>
<td>- Miegel (2010)</td>
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<td>- D’Alisa/Demaria/Kallis (2016)</td>
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<td>- Gran (2017)</td>
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Growth drivers

Demand side

Supply side

Sufficiency

Self-supply

Regional economy

Steady-state industry

Institutional change

Post-growth economy

Growth criticism

„Productivity trap“

Failure of decoupling

Peak everything

Social inequality

Peak happiness

Financial crises

Post-growth economics
Is there a maximum of services/products consumers could desire?
Is happiness related to material wealth? (Layard 2005)
A new consumer theory: The microeconomics of sufficiency

Welfare as a function of own time that has to be invested in every act of consumption

Restriction:

\[ T = 24 - t_{\text{work}} - t_{\text{non-market}} - t_{\text{sleep}} \]

\[ \sum_{i} t_{i} \leq T \]

Fixed consumption time:

\[ u(t_{i}) = 0 \quad \text{if} \quad t_{i} < t_{i}^{\text{min}} \]

Marginal utility of consumption time:

\[ \frac{\partial^2 u}{\partial t^2} < 0 \]

- After reaching a critical amount of consumption activities any further increase of it may even worsen the individual situation.
- Economies of time: sufficiency as rational protection against stress
Post-growth economics

Growth criticism
- "Productivity trap"
- Failure of decoupling
- Peak everything
- Social inequality
- Peak happiness
- Financial crises

Growth drivers
- Demand side
- Supply side

Post-growth economy
- Sufficiency
- Self-supply
- Regional economy
- Steady-state industry
- Institutional change
Post-growth economy: Three dimensions of the supply side

20 hours of „normal“ weekly working time + 20 hours for non-market production

Commerzialized sector of the economy

Global

Industrial Specialization
Global Sourcing
Offshoring
Durable Product Design
Modularity/Reparability
Aesthetic Durability
Efficiency/Closed Loops

Medium Supply Chains

Repair services
Maintenance/optimization
Renovation/conversion
Recycling of goods
Sharing services
Hand-craft/Organic Farming
Regional Money

Local

Self-supply

Own production
Maintenance and repair
Sharing goods

Output

Labour intensity

Capital intensity

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Urban subsistence: Resilience by a prosumer movement

**Market Economy**
- Industrial system

**Susistence Resources**
- Input 1: Own Time
- Input 2: Craft, manual skills + competence
- Input 3: Social interaction

**Self-work**
- Subsistence outputs
  - Sharing usage of products
    - For example: Car Sharing, collaborative consumption of goods and resources, etc.
  - Extension of the use period
    - For example: Using own capabilities to repair, maintain, upgrade, rebuild material goods, etc.
  - Own production
    - For example: Do-It-Yourself movement, Community gardens, open source design, etc.

Substitution of industrial production
Interaction between prosumers and companies

Prosumers

- Manual production (self-supply)
- Intensification of usage (sharing)
- Increasing the durability of goods

Companies

- New products
- Used products
- Time resources
- Craft and manual skills
- Social networks
- Intensification of usage (sharing)
- Increasing the durability of goods
- Production of new goods and services
- Second hand trade
  - Rebuilding
  - Maintenance/Repair
- Part-time models to absorb output reduction
- Prosumer management
  - Repairable design
- Interaction between prosumers and companies
  - New products
  - Used products
  - Time resources
  - Craft and manual skills
  - Social networks

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Five steps towards the post-growth economy: Reducing the industry

1. Reduction, throwing off ballast

2. Non-market work: self-sufficiency, craft, urban subsistence

3. De-globalization by means of regional markets and money

4. Material zero-sum games; creating values without physical production; optimization already existing artefacts by enhancing the durability of usage; common and intensive usage; maintenance, renovation, rebuilding, remanufacturing, sharing, second hand trade, etc.
How to get there: Leaving the comfort area... a political program?

1. Political measures are possible – but only theoretically:
   - Personal CO$_2$ accounts: 2-3 tons per year
   - 100% Money approach; regulating banks; Tobin tax
   - Commons based institutions to allocate and distribute resources, democratizing capital
   - Reform of education systems: craft instead of specialized work
   - Reducing and shaping the division of labour (20 hours)
   - Abolishment of advertising
   - Cutting of harmful subsidies
   - Programs to dismantle traffic and industrial infrastructures
   - Strict moratorium on projects resulting in soil and land areas being sealed

2. Handling the next probable collapse scenarios

3. Social diffusion of post-growth compatible lifestyles and supply systems

Conclusion: Only options 2 and 3 will work.
The transformation towards a post-growth economy is only a matter of time – it will occur by design or desaster.