

Economics of Innovation.  
Where are we, How did we get here and  
Where we are heading

Innovation and the Labour Market

Maria Savona

SPRU, University of Sussex and Luiss

# My own (PILLARS) experiment: “Technology and the FoW. A policy conundrum” asked to mainstream and non mainstream scholars (and Luc Soete)

US UNIVERSITY OF SUSSEX | SPRU SCIENCE POLICY RESEARCH UNIT | Pillars | CESifo | Vienna International University

**VENICE SUMMER INSTITUTE 2023**



Workshop to be held on the island of San Servolo in the Bay of Venice, Italy

**Technological Change and the Future of  
Work: Combining Disciplinary Approaches**

San Servolo, 21–22 June 2023

Organizers: Maria Savona and Oliver Falck

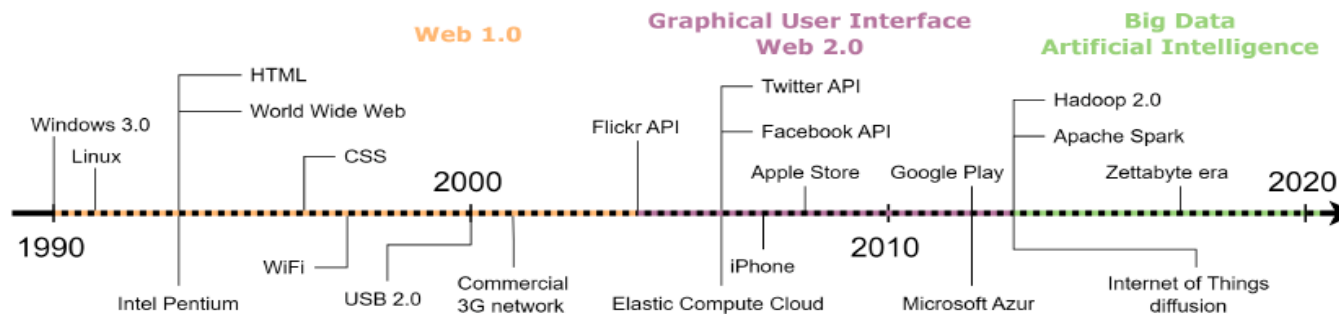
1. How do economics of innovation and other disciplines articulate the nuances of the "Future of Work"?
2. Is this time really different with respect to previous technological waves? In what ways?
3. How are emerging digital automation technologies affecting the intrinsic human nature of work? What is left to human creativity (and serendipity)?
4. Are traditional concerns on dear old unemployment alongside new concerns around routinised tasks and workers' "wellbeing" (e.g. mental health in a digital context) sufficiently taken into account in current research and policy agendas?

# Heterogeneity of approaches (I) – Digging deeper into technology and human-machine interactions

- **Ciarli, Prytkova et al**– Identifying 500 families of emerging STI areas of digital automation technologies and measuring exposure of industries and occupations
- **Staccioli et al** – The above granularity on robots
- **Neffke** – technological change and the reorganization of coordination across teamwork, impact on bargaining and division of labour
- **Savona et al** – Emerging digital technologies and labour markets: A systematic review of the technical literature
- **SPRU/Merit team** - Technology long and short cycles and employment (mixed team)

Technologies change over time ([Freeman 1982](#))

⇒ Do technology cycles play a role? Do effects differ in the short run?



# Heterogeneity of approaches (II) – Beyond the Acemoglu complex?

- **Moschella et al** – Diff-in-Diff, frontier matched firm level data set, reasonable IV, traditional analysis of labour displacement versus labour augmentation effects. Note that technology as investment and imported HS6 codes based on Acemoglu taxonomy
- **Ifo Team** - on automation potential's expectations, treatment effect of automation, training and education policies, rich German individual dataset (Northern countries, better access)
- **Lightcast data** - Frontier big OJV unstructured data set, privately collected and sold. Data producers are also data users, though analysis of traditional labour demand, biased coverage towards developed countries and on a fraction of labour demand

	English-speaking	European
Countries	Australia, Canada, New Zealand, United States, United Kingdom	Austria, Belgium, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland
Taxonomies	<ul style="list-style-type: none"> <li>• Lightcast Occupation Taxonomy</li> <li>• Lightcast Skills Taxonomy (32,000+ skills)</li> </ul>	<ul style="list-style-type: none"> <li>• ESCO Occupation Taxonomy</li> <li>• ESCO skills (~14,000 skills)</li> </ul>

# 20 years of fringe's position across dpts (SPRU and now DEF)

- [Special Issue on the The Economics of Artificial Intelligence, Robotisation and Digital Transformations. What challenges for the governance of inclusion](#)  
(Research Policy guest edited by Maarten Goos and myself)
- **Avenues of research :**
  - Aggregate levels of **unemployment** in addition to task displacement and reconfiguration
  - Automation not as a competitive strategy of off-shoring but as a **consequence of 'strategic autonomy' or nearshoring/friendshoring!**
  - The future of human creativity and the **nature of knowledge** as a consequence of adoption and diffusion of generative AI –What is tacit? What is commodification of standardized knowledge?
  - **'Time saving digital automation'** (von Tunzelmann) and how to direct the time (and employment) saved to new public uses
  - Heterodoxy can help establishing a novel regulatory framework for a trustworthy AI, because we have contributed to past technological waves (i.e. pharma, Orsenigo)
  - **The Governance of data value:** redistribution, property rights and data sharing –Can we really rely on traditional IO/ competition literature?

# More in general: Diversity and creativity in economics (of innovation) and labour

1. How can we support younger generations into critical thinking, raising non standard, most relevant questions that not necessarily are those that would only ensure them a tenure job in academia?
2. More generally: How can we preserve classical and non classical heterodoxy (at least in EU and UK and ideally in US)?
3. I am still hopeful that a fruitful relationship is possible – showing that raising relevant questions pays more off than crafting an incremental “economic profession” output.
4. AER nowadays would not publish anything so pathbreaking and unconventional on technology and labour

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"Permanent" Technological Unemployment: "Demand for Commodities Is Not Demand for Labor"

Author(s): Hans P. Neisser

Source: *The American Economic Review*, Mar., 1942, Vol. 32, No. 1, Part 1 (Mar., 1942), pp. 50-71

Published by: American Economic Association

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