

# The Limits to Growth: Sustainability and the Circular Economy

## Lecture 8: Circular Societies

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- Updated versions of these slides will be available in our [Github repository](#).

**NEWS/UPDATES**

## Course Evaluation

- Link: [Click Me](#)



# EXERCISE E06

## Exercise E06

### Feedback

- A few students had issues downloading OpenLCA.
- In general, a large variety of fruits/vegetables selected for LCA:
  - Lemons
  - Avocados
  - Mangoes
  - Potatoes
  - Strawberries
  - Tomatoes
  - Bananas
  - ..

## Exercise E06

### Feedback

- Some of you were able to run impact assessment calculations
- A (completely un-scientific) comparison of some of your calculations in terms of GWP, for a 1kg functional unit:
  - Strawberries: 1293.7 kg CO<sub>2</sub> eq
  - Tomatoes: 3950 kg CO<sub>2</sub> eq
  - Avocados: 1.38kg CO<sub>2</sub> eq \* (Could not verify this calculation since LCI graph was not included)
- LCA for strawberries included aspects of packaging, transportation and bio-waste, while the others were lacking at least some of these aspects.

## Exercise E06

### Feedback

- How easy difficult was it to use/understand openLCA?
  - a) easy
  - b) okay
  - c) difficult
  - d) impossible



# **CIRCULAR ECONOMY VS. CIRCULAR SOCIETY**

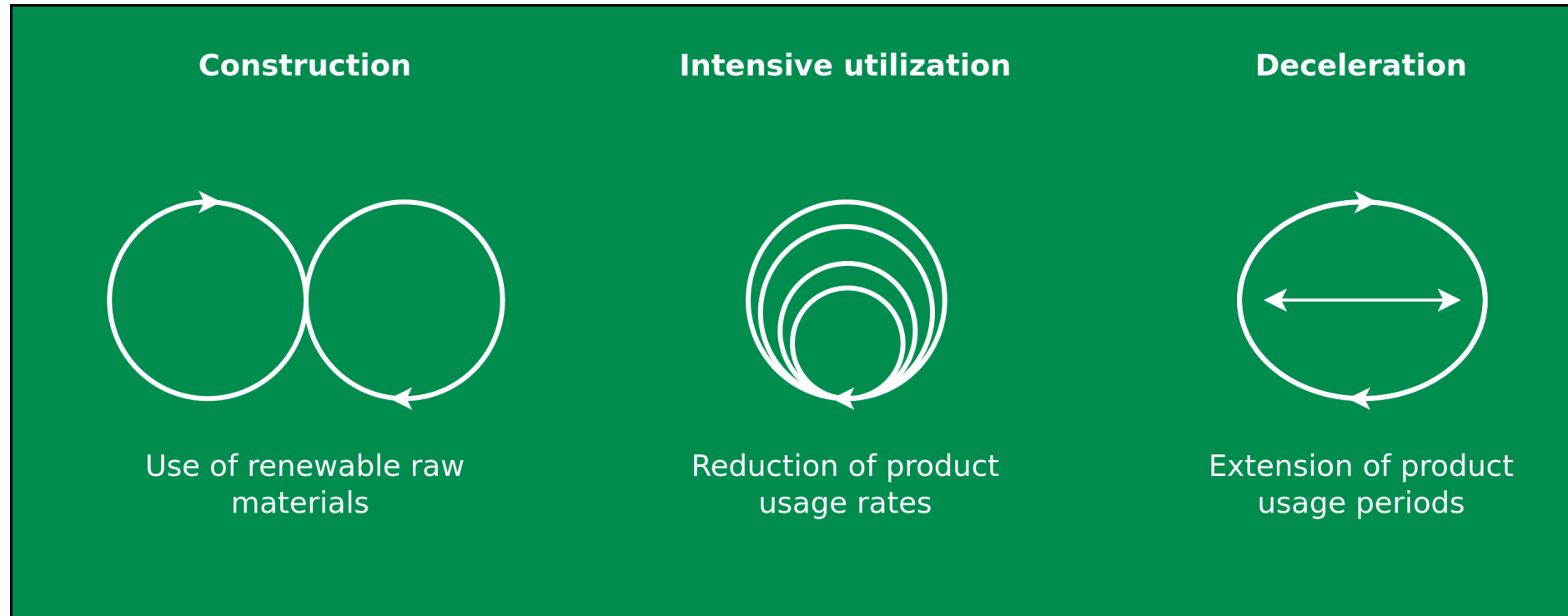
# Circular Society

## CE Recap

- Goals of the CE:
  - Maintain natural resources and minimize the discharge of substances that are harmful to health and nature
  - Ecological modernization of the economy to increase resource efficiency, e.g., by technical innovation and digital solutions
  - Products/services designed and constructed in such a way, that they can be returned to the economic and material flows at any time with little financial and energetic effort
  - Increase/maximize utilization of resources, e.g., Performance Economy

# Circular Society

## CE Recap



# Circular Society

## CE Criticism

- Replace the LE with circularly oriented forms of consumption and production
- CE focus mostly on earned value management (“Wertschöpfungsmanagement”), product-service systems, product/business model innovations within existing power asymmetries
- Decouple economic growth and consumption of natural resources

# Circular Society

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→ **But why do we need never ending economic growth and why is it good to consume as many goods and services as possible?**

# Circular Society

## CE Criticism

Economic value of the product

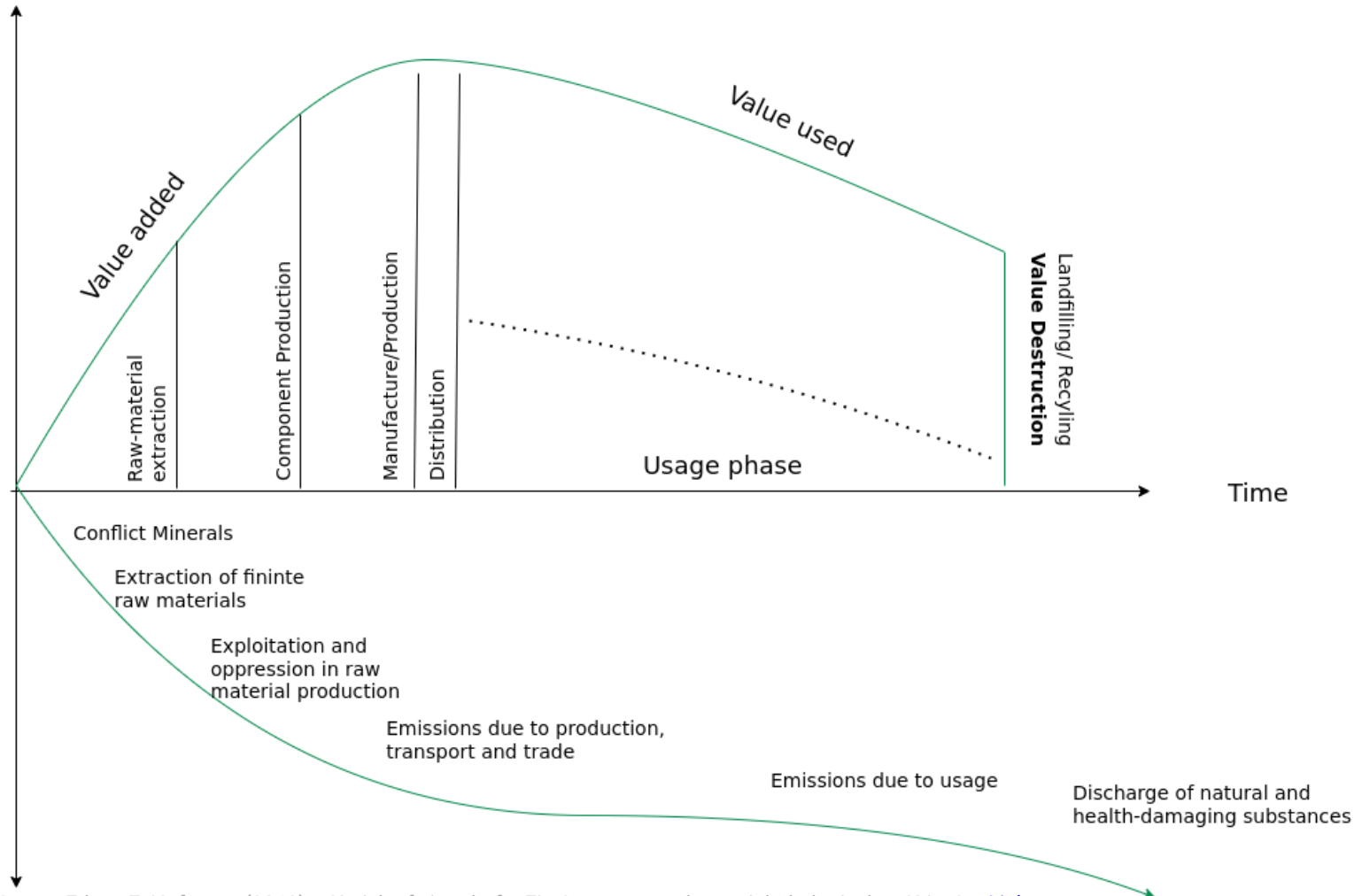
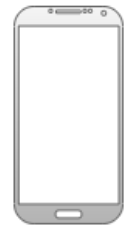


Image adapted from: M. Jaeger-Erben, F. Hofmann (2019) – Kreislaufwirtschaft - Ein Ausweg aus der sozial-ökologischen Krise? – [Link](#).

# Circular Society

## CE Criticism

- Replace the LE with circularly oriented forms of consumption and production
- CE focus mostly on earned value management (“Wertschöpfungsmanagement”), product-service systems, product/business model innovations within existing power asymmetries
- Decouple economic growth and consumption of natural resources

→ **But why do we need never ending economic growth and why is it good to consume as many goods and services as possible?**

- Alternatives:
  - Sufficiency strategies and lifestyle changes
  - Question the prevailing entrepreneurial orientation towards the shareholder concept
  - Deconstruction of existing power and hegemonic relations

# Circular Society

## Overview

- Circular Society → CS
- Goals of the CS:
  - Not just “CE + social”
  - Socio-political transformation and reorganization
  - Replace intransparent and inequity-based value chains of the LE with democratic, transparent and cooperatively organized value chains



# Circular Society

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  - Replace intransparent and inequity-based value chains of the LE with democratic, transparent and cooperatively organized value chains
  - Also → preserve the environment/resources for present and future generations and enable social participation and quality of life

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  - Not just “CE + social”
  - Socio-political transformation and reorganization
  - Replace intransparent and inequity-based value chains of the LE with democratic, transparent and cooperatively organized value chains
  - Also → preserve the environment/resources for present and future generations and enable social participation and quality of life
  - All-encompassing change necessary if the CE is to be the subject of a socio-ecological transformation
  - Democratization of value creation processes and strategies for the activation and emancipation of different stakeholder groups

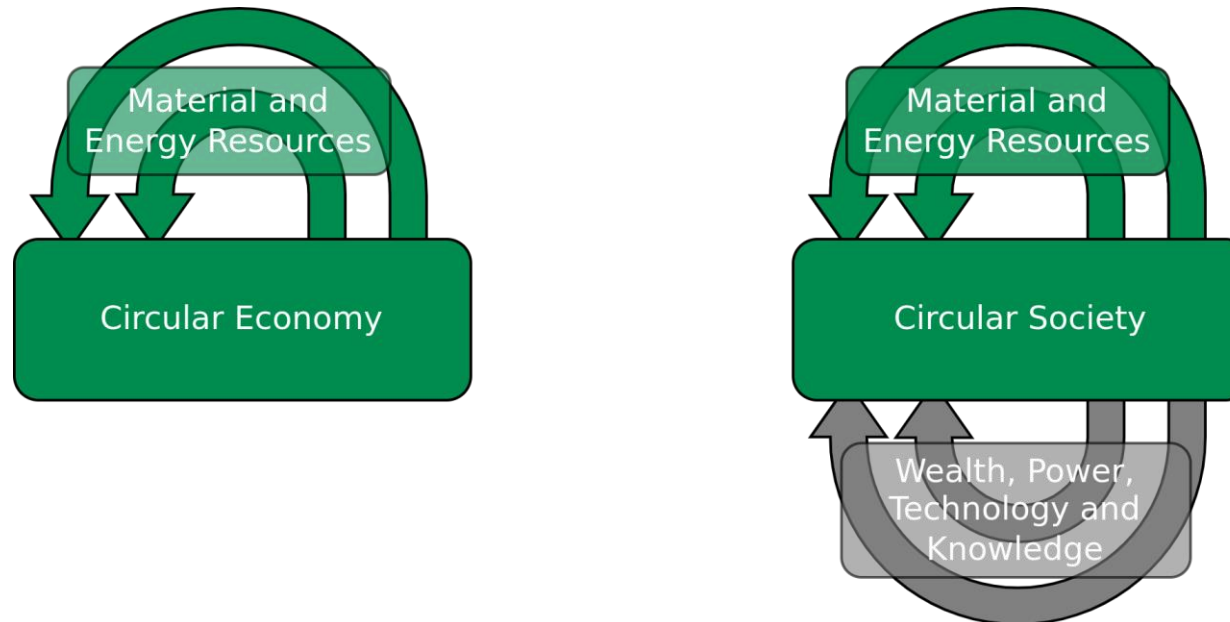
# Circular Society

## Definition

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# Circular Society

## CE vs. CS

*CE = market-based solutions and economic considerations*

*CS = Circularity as a holistic social transformation*



# Circular Society

## CE vs. CS

Circularity vision	Temporal scale	Spatial scale	Sustainability factors included	Perspective on the resource nexus	Views on capitalism and decoupling	Main goal/objective	Narrative
Circular Society	Very long term: multiple generations (beyond 50 years)	Macro-scale: planet Earth	People, Planet, Prosperity	Changing consumption and production patterns to keep energy, biodiversity and material resources within safe planetary limits.	Sceptical regarding the possibility of decoupling and the sustainability of capitalism.	Maintaining socio-ecological health and wellbeing for present and future generations of human and non-human life.	The earth is borrowed from future generations of living beings, humans must preserve, respect, restore and share it in a fair manner, even if that entails changing lifestyles and consumption patterns.
	Long term: 1 to 2 generations (20-50 years)	Macro-scale: planet Earth	People, Planet, Prosperity	Balancing trade-offs and synergies to keep energy, biodiversity and material resources within safe planetary limits.	Believe in the possibility of decoupling and the sustainability of capitalism.	Preserving social well-being and the biophysical health of the Earth system in line with the SDGs.	Humans must ensure justice, fairness and participation in the sustainable stewardship of the Earth, even if that entails redistributing and changing consumption patterns.

Table adapted from M. C. Friant, R. Salomone, W. J. V. Vermeulen (2020) – A Typology of Circular Economy Discourses: Navigating the Diverse Visions of a Contested Paradigm – [Link](#)



## Circular Society

### CE vs. CS

Circularity vision	Temporal scale	Spatial scale	Sustainability factors included	Perspective on the resource nexus	Views on capitalism and decoupling	Main goal/objective	Narrative
Circular Economy	Long term: one generation (19-25 years)	Macro-scale: planet Earth	Planet, Prosperity	Balancing trade-offs and synergies to keep energy, biodiversity and material resources within safe planetary limits.	Believe in the possibility of decoupling and the sustainability of capitalism.	Maintaining the biophysical health of the Earth system.	Reducing humanity's overall ecological footprint and balancing resource limits and constraints is key to ensure the stability of the biosphere and long-term economic prosperity.
	Mid-term: 1 to 2 government planning cycles (5-10 years)	Meso-scale (country, region, industrial park, city)	Planet, Prosperity	Optimizing and securing material, natural and energy resources, especially for critical raw materials.	Believe in the possibility of decoupling and the sustainability of capitalism.	Securing and preserving critical resources and materials.	Strategically maximising socio-efficiency and balancing resource use is necessary to maintain resource security and ensure geopolitical stability.
	Short-term: single product life-cycle (1 to 2 years)	Micro-scale (single product, service, or firm)	Planet, Prosperity	Optimizing material and energy resource flows in product design.	Believe in the possibility of decoupling and the sustainability of capitalism.	Capturing opportunities to lower both environmental impacts and economic costs.	Ensuring optimum resource efficiency through eco-innovation leads to win-win solutions that reduce ecological harm and increase economic value.

# Circular Society

## CE vs. CS – Typology

	Holistic	Segmented
Optimist	<p><b>Reformist Circular Society</b></p> <ul style="list-style-type: none"> <li>• <i>Assumptions:</i> reformed form of capitalism is compatible with sustainability and socio-technical innovations can enable eco-economic decoupling to prevent ecological collapse.</li> <li>• <i>Goal:</i> economic prosperity and human well-being within the biophysical boundaries of the earth.</li> <li>• <i>Means:</i> technological breakthroughs, social innovations and new business models that improve ecological health, resource security, and material prosperity for all.</li> </ul>	<p><b>Techcentric Circular Economy</b></p> <ul style="list-style-type: none"> <li>• <i>Assumptions:</i> capitalism is compatible with sustainability and technological innovation can enable eco-economic decoupling to prevent ecological collapse.</li> <li>• <i>Goal:</i> sustainable human progress and prosperity without negative environmental externalities.</li> <li>• <i>Means:</i> economic innovations, new business models and unprecedented breakthroughs in CE technologies for the closing of resource loops with economic value creation.</li> </ul>
Sceptical	<p><b>Transformational Circular Society</b></p> <ul style="list-style-type: none"> <li>• <i>Assumptions:</i> capitalism is incompatible with sustainability and socio-technical innovation cannot bring absolute eco-economic decoupling to prevent ecological collapse.</li> <li>• <i>Goal:</i> a world of conviviality and frugal abundance for all, while fairly distributing the biophysical resources of the earth.</li> <li>• <i>Means:</i> complete reconfiguration of the current socio-political system and a shift away from productivist and anthropocentric worldviews to drastically reduce humanity's ecological footprint and ensure that everyone can live meaningfully, and in harmony with the earth.</li> </ul>	<p><b>Fortress Circular Economy</b></p> <ul style="list-style-type: none"> <li>• <i>Assumptions:</i> there is not alternative to capitalism and socio-technical innovation cannot bring absolute eco-economic decoupling to prevent ecological collapse.</li> <li>• <i>Goal:</i> maintain geostrategic resource security and earth system stability in global conditions where widespread resource scarcity and human overpopulation cannot provide for all.</li> <li>• <i>Means:</i> innovative technologies and business models combined with rationalized resource use, imposed frugality and strict migration and population controls.</li> </ul>



# CONCLUSION

## Conclusion

- Circular Economy (CE):
  - Maintain natural resources and minimize the discharge of substances that are harmful to health and nature → Increase/maximize utilization of resources, e.g., Performance Economy
  - Ecological modernization of the economy to increase resource efficiency, e.g., by technical innovation and digital solutions

## Conclusion

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  - Maintain natural resources and minimize the discharge of substances that are harmful to health and nature → Increase/maximize utilization of resources, e.g., Performance Economy
  - Ecological modernization of the economy to increase resource efficiency, e.g., by technical innovation and digital solutions
- Circular Society (CS):
  - Not just “CE + social” instead socio-political transformation and reorganization
  - Replace intransparent and inequity-based value chains of the LE with democratic, transparent and cooperatively organized value chains
  - Democratization of value creation processes and strategies for the activation and emancipation of different stakeholder groups

**DETOUR**

## Detour Sustainability

**Sustainability → Consume less**

- Consume less → Less money spend, i.e. lower living costs?

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**Sustainability → Consume less**

- Consume less → Less money spend, i.e. lower living costs?
- Lower living costs → Less work hours required to cover costs, e.g., 20h work week?
- Technological advances reducing workload even further?

## Detour

### 15h Work Week

John Maynard Keynes predicted a 15h work week in his 1930 essay "*Economic Possibilities for our Grandchildren*"



## Detour

### Why am I working 40+h a week?

- Lively debates pertaining to Keynes prediction – especially among economists.
- Main problem: Keynes did not account for the massive increase in consumerism → Majority of people chooses more toys and pleasure over less work hours

## Detour

### Why am I working 40+h a week?

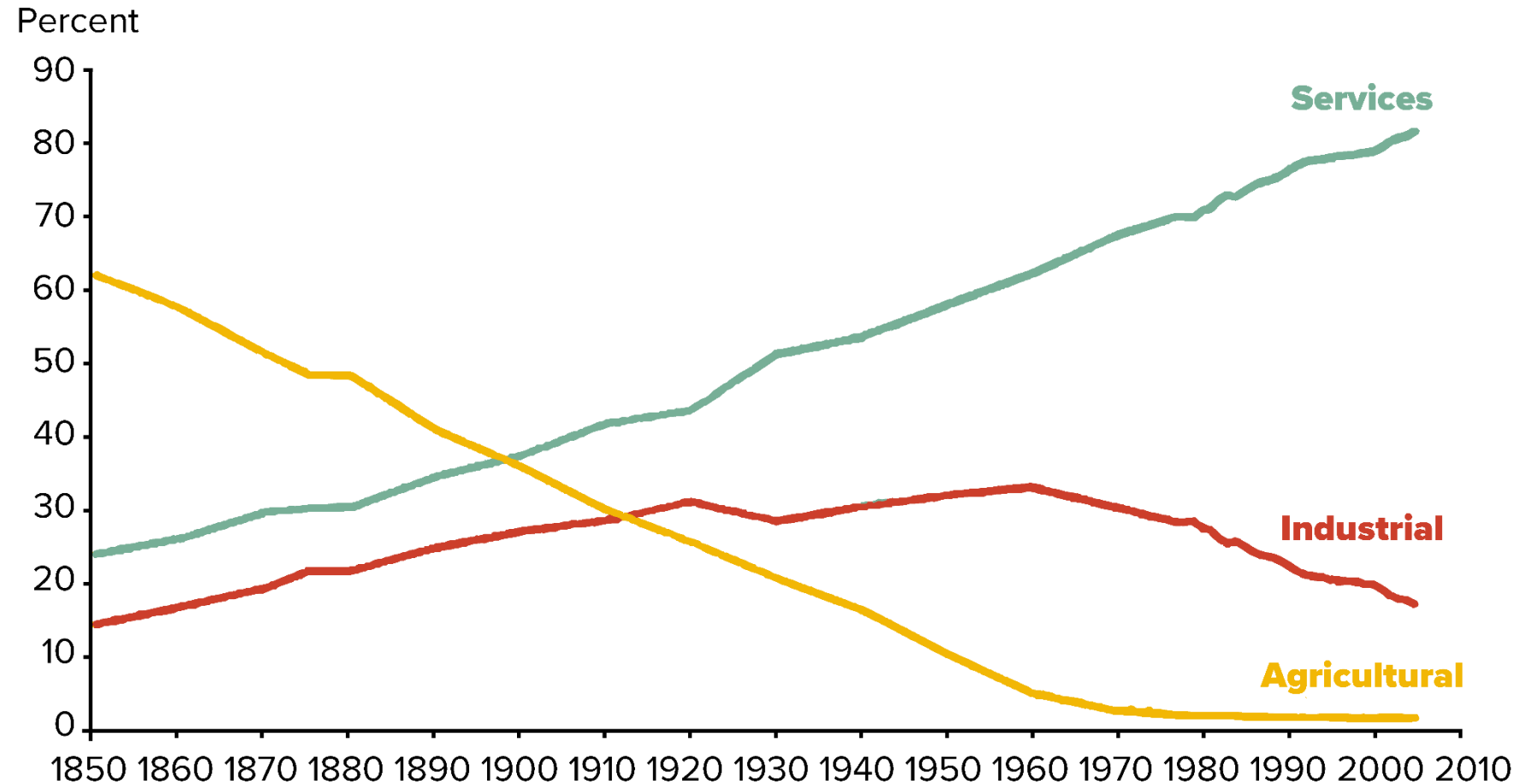
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**Contradicts our sustainability paradigm (consume less).**

## Detour

### Shift in Labor Force 1850 – 2010



## Detour

### Bullshit Job – Essay and Book by David Graeber

- Essay: *On the Phenomenon of Bullshit Jobs: A Work Rant* (2013) – [Link](#)
- Book: *Bullshit Jobs: A Theory* (2018)

## Detour

### Bullshit Job – Definition

*„Form of paid employment that is so completely pointless, unnecessary, or pernicious that even the employee cannot justify its existence even though, as part of the conditions of employment, the employee feels obliged to pretend that this is not the case.“*

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### Bullshit Job – Definition

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→ Inefficiencies in capitalism?



# Detour

## Bullshit Jobs – Categories

D. Graeber (2013) – On the Phenomenon of Bullshit Jobs – Essay – [Link](#)

D. Graeber (2018) – Bullshit Jobs: A Theory

## Detour

### Bullshit Jobs – Categories

- Flunkies: Serve to make their superiors feel important, e.g., receptionists, administrative assistants, door attendants, store greeters, makers of websites whose sites neglect ease of use and speed for looks



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- Box tickers: Create the appearance that something useful is being done when it is not, e.g., survey administrators, in-house magazine journalists, corporate compliance officers, quality service managers
- Taskmasters: Create extra work for those who do not need it, e.g., middle management, leadership professionals

# Detour

## Bullshitization

*Transition of a meaningful job into a bullshit job through corporatization, marketization or managerialism.*

## Detour

### Changes in full-time staff size and student enrollment (1976–2011 and 1976–2018)

	1976	2011	% change 1976–2011	2018	% change 1976–2018
Faculty	434,000	762,114	+76%	832,119	+92%
Executive/Administrative	97,003	231,602	+139%	255,881	+164%
Other Professionals	150,319	699,867	+366%	830,189	+452%
Nonprofessional Staff	630,511	742,445	+18%	631,675	+0.19%
Student Enrollment	11,012,137	21,010,590	+91%	19,645,918	+78%



## Detour

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John Maynard Keynes predicted a 15h work week in his 1930 essay "*Economic Possibilities for our Grandchildren*"

## Detour

### Bullshit Jobs – Why?

- Assumption → Capitalism does not allow for inefficiencies



## Detour

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- Hypothesis → Maybe this is not capitalism and rather just "managerial feudalism"?

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*Feudalism: „The dominant social system in medieval Europe, in which the nobility held lands from the Crown in exchange for military service, and vassals were in turn tenants of the nobles, while the peasants (villeins or serfs) were obliged to live on their lord's land and give him homage, labour, and a share of the produce, notionally in exchange for military protection.”*

*(Oxford Dictionary)*

## Detour

### Bullshit Jobs – Why?

- Assumption → Capitalism does not allow for inefficiencies
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  - The pains of dull work as a justification for the ability to fulfill consumer desires
  - Fulfilling those desires → Reward for suffering through pointless work

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  - The pains of dull work as a justification for the ability to fulfill consumer desires
  - Fulfilling those desires → Reward for suffering through pointless work
  - Bullshit jobs also serve political ends, in which political parties are more concerned about having jobs than whether the jobs are fulfilling.
  - Also → Populations occupied with busy work have less time to revolt

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(Oxford Dictionary)



# Detour

## Bullshit Jobs – Now What?

D. Graeber (2013) – On the Phenomenon of Bullshit Jobs – Essay – [Link](#)

D. Graeber (2018) – Bullshit Jobs: A Theory

## Detour

### Bullshit Jobs – Now What?

- **Graeber's solution → Universal Basic Income (UBI) → Livable benefit paid to all, thus letting people work at their leisure**

## EXERCISE E08

## Exercise E08

### Circular Economy vs. Circular Society

**Task:** In the lecture, we presented a typology of the circular economy vs. circular society discourse (CE vs. CS – Typology). Which of the four categories (*Reformist Circular Society*, *Transformational Circular Society*, *Techcentric Circular Economy*, *Fortress Circular Economy*) do you prefer and/or deem to be more likely and why?

- Explain your choice.

Submit your submission according to the instructions in the [exercise sheet](#).



## Additional Resources

- Circular Societies (German) – [Link](#)
- David Graeber. *Debt: The First 5000 Years* (2011).
- David Graeber. On the Phenomenon of Bullshit Jobs – Essay (2013) – [Link](#).
- David Graeber. *Bullshit Jobs* – Book (2018).

# Questions?