

The Limits to Growth: Sustainability and the Circular Economy

Lecture 8: Circular Society

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NEWS/UPDATES

Course Evaluation

QR Code and Link

- Link: [Click Me](#)



EXERCISE E05

Exercise E05

Feedback

- Proposals:
 - “Massively reduce consumption of (fossil) resources and associated pollution; build a circular economy, reduce consumption accompanied by a change in behavior (way of living, working, producing, even thinking . . .)”
 - Reduce footprint + reduce pollution
 - Invest in healthcare and education
 - Management of remaining resources (e.g., arable land, etc.)
 - Population control, e.g., birth rate == mortality rate

Exercise E05

Feedback

- Proposals:
 - “Global withdrawal from export-oriented market economy”
 - “Capping the workweek at 20 hours whilst increasing real wages”
 - “Shift from planned obsolescence to planned longevity”

Exercise E05

Question

- “I noticed a quite steep increase in the Human Welfare Index in the World3-Model from 1940-1941. As this is during WW2, I am wondering about the reason. Do you have an explanation for this?”

EXERCISE E06



Exercise E06

Feedback

Exercise E06

Feedback

- Consumer products:
 - Slackline
 - Clothes (fancy shoes)
 - Books

Exercise E06

Feedback

- Consumer products:
 - Slackline
 - Clothes (fancy shoes)
 - Books
- Household appliances
 - Iron & ironing board
 - Washing machine
 - Vacuum cleaner
 - (Refrigerator) + (Microwave)
 - Electric toothbrush → ???

Exercise E06

Feedback

- Consumer products:
 - Slackline
 - Clothes (fancy shoes)
 - Books
- Household appliances
 - Iron & ironing board
 - Washing machine
 - Vacuum cleaner
 - (Refrigerator) + (Microwave)
 - Electric toothbrush → ???
- Tools → Tool box, drilling machine, fan/cooler, etc.
- Electronics → Computer, camera, printer

Exercise E06

Feedback

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 - Slackline
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- Tools → Tool box, drilling machine, fan/cooler, etc.
- Electronics → Computer, camera, printer
- Bicycle & air pump → most sport equipment
- Cars

Exercise E06

Feedback

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- Tools → Tool box, drilling machine, fan/cooler, etc.
- Electronics → Computer, camera, printer
- Bicycle & air pump → most sport equipment
- Cars
- Food → Canteen/mensa instead of your own kitchen + scalability + avoid food waste

CIRCULAR ECONOMY VS. CIRCULAR SOCIETY

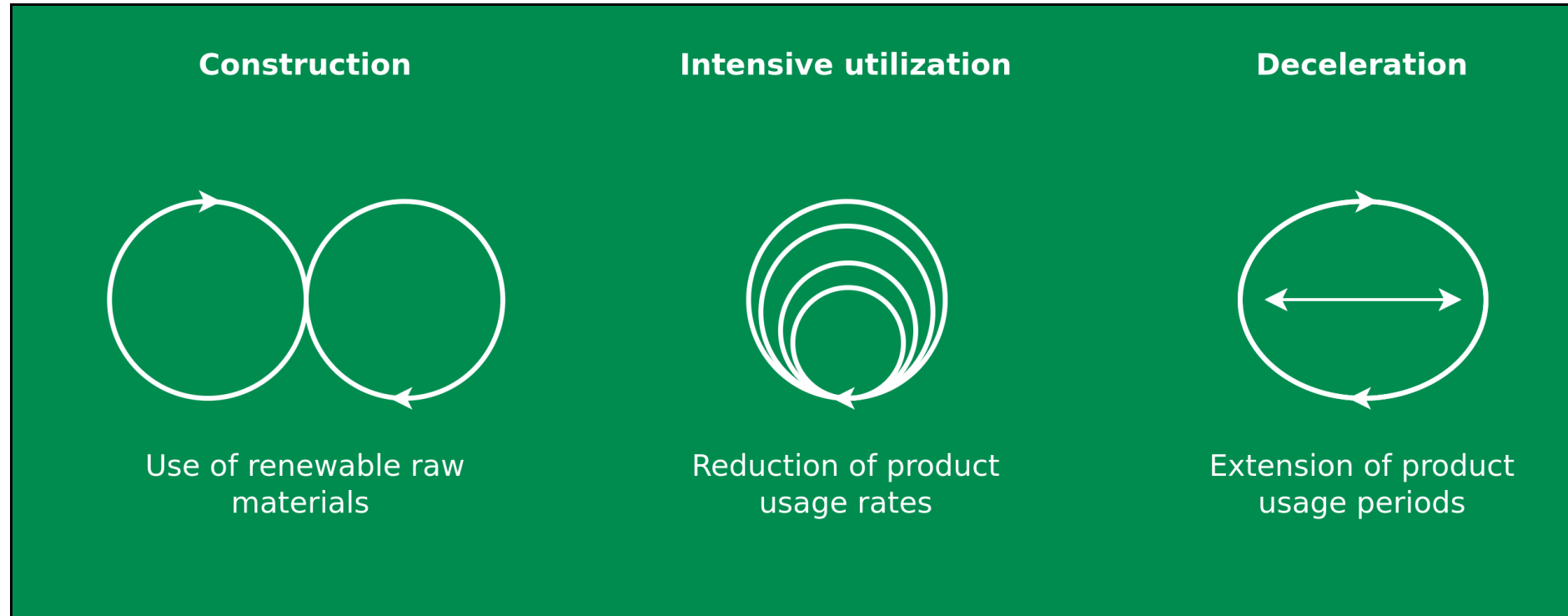
Circular Society

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

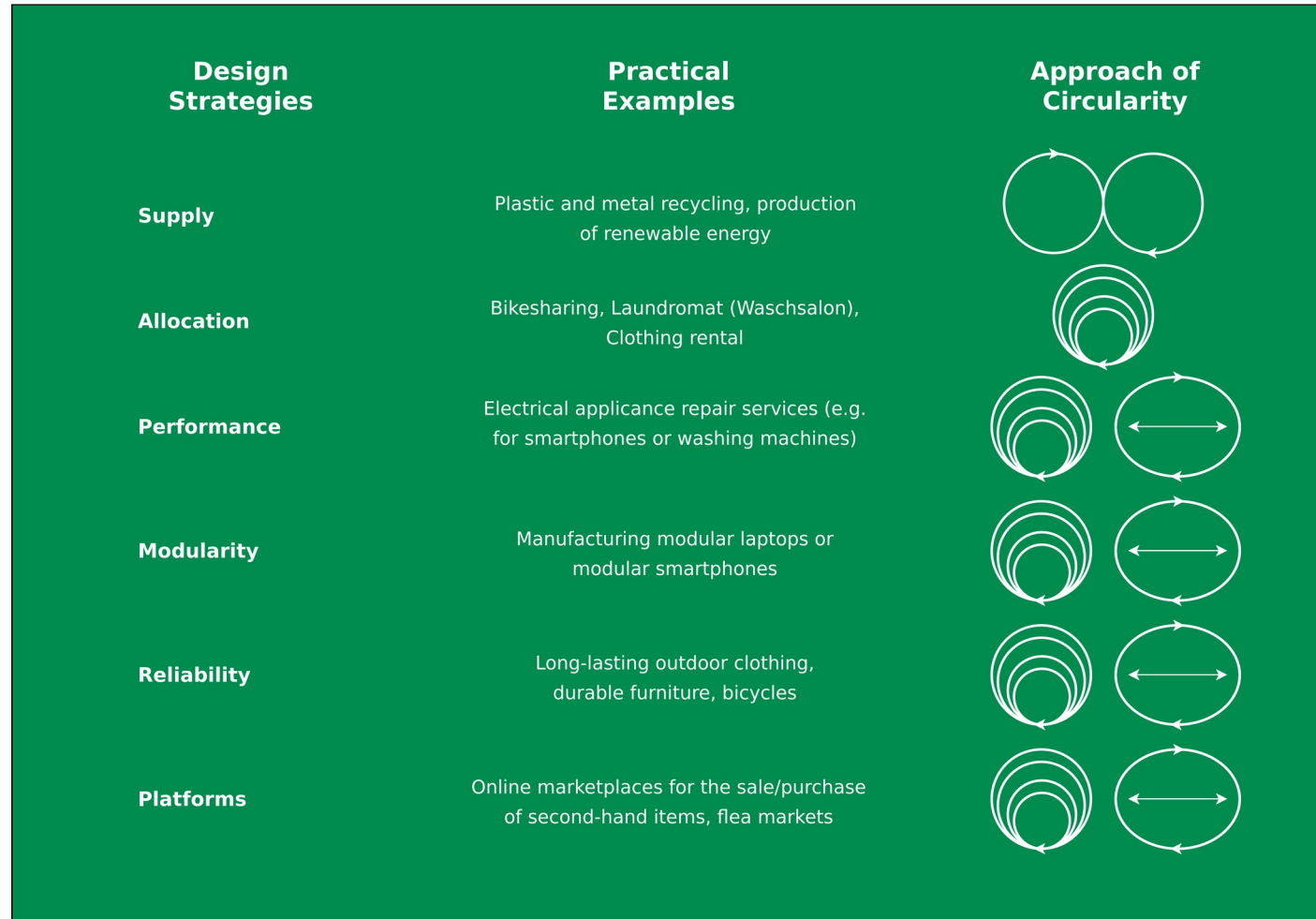
CE Recap



Circular Society

CE Recap

BUSINESS MODEL TOPOLOGY OF THE CIRCULAR ECONOMY



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

CE Criticism

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- 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?

Circular Society

CE Criticism

Economic value of the product

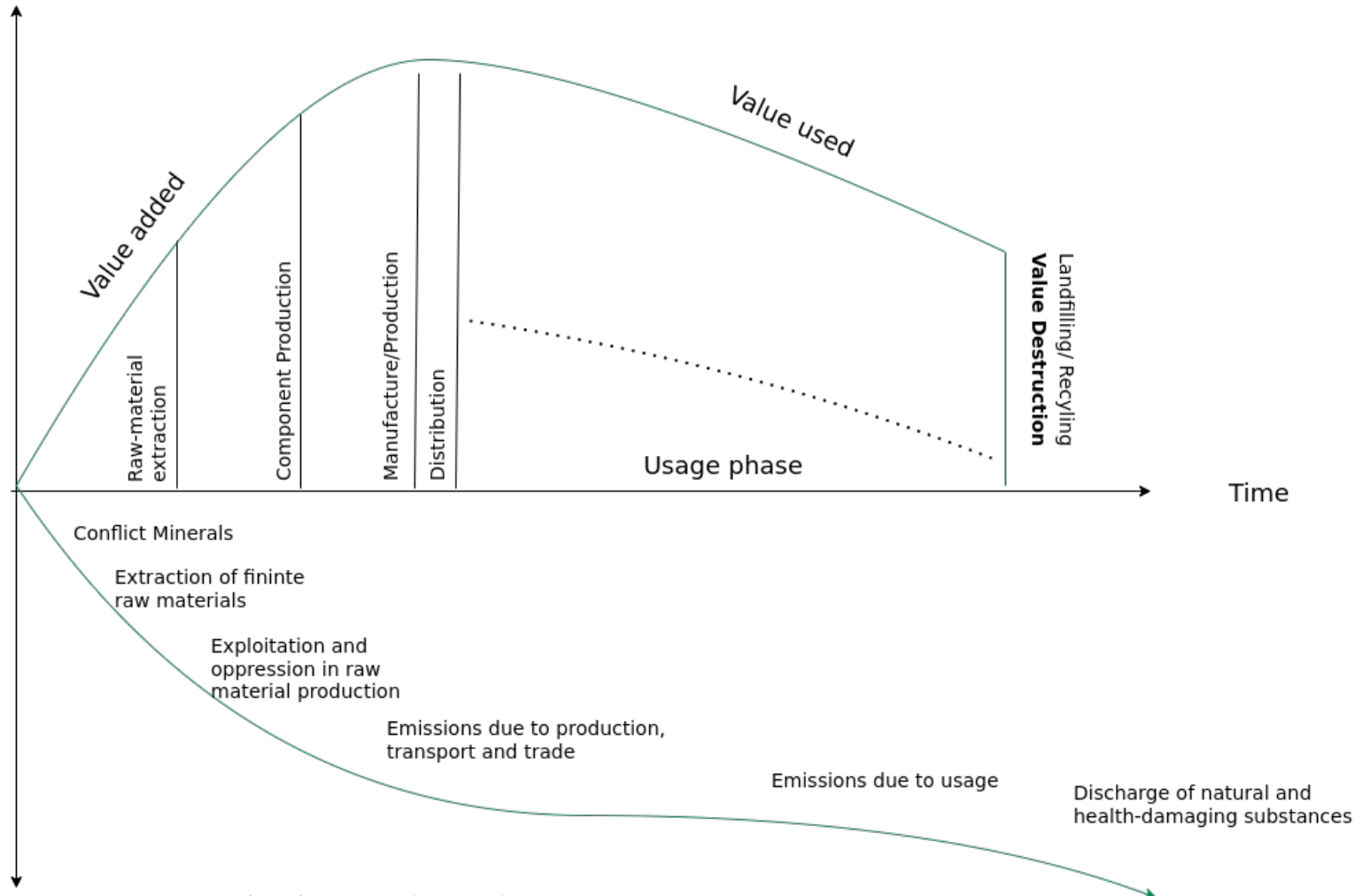
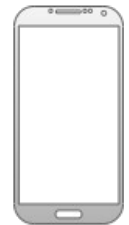


Image adapted from: M. Jaeger-Erben, F. Hofmann (2019) – Kreislaufwirtschaft - Ein Ausweg aus der sozial-ökologischen Krise? – [Link](#).

Circular Society

CE Criticism

- Replace the LE with circularly oriented forms of consumption and production
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- 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

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
 - Also → preserve the environment/resources for present and future generations and enable social participation and quality of life

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
 - 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

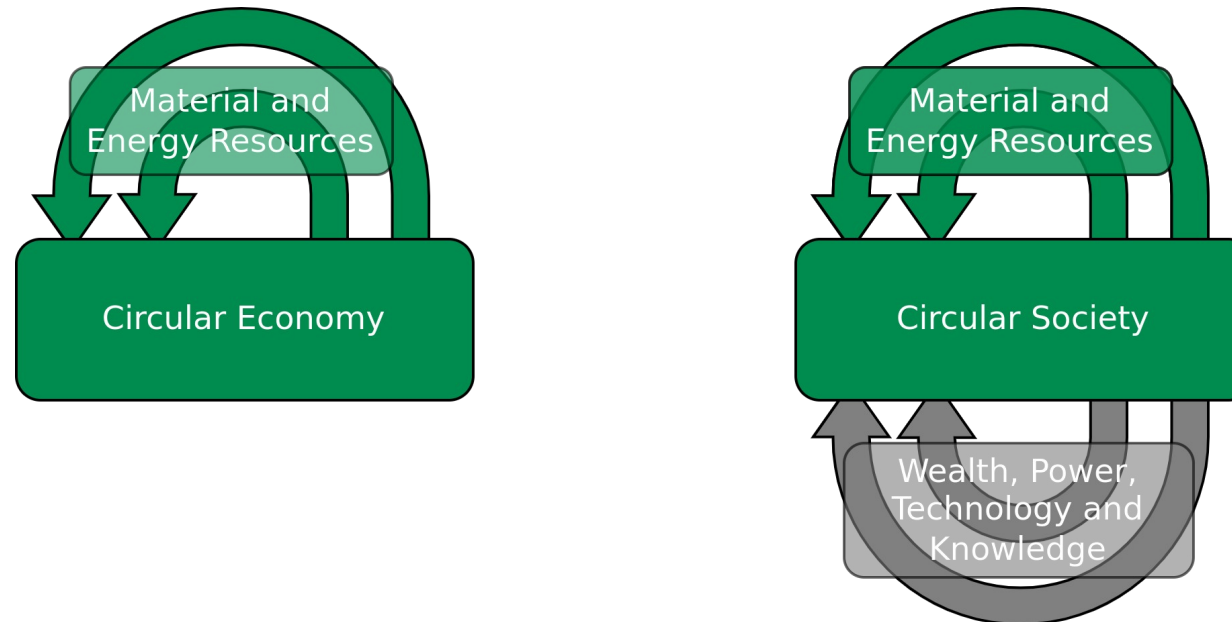
Circular Society

Definition

„A circular society defines discourses with a vision of circularity where not only resources are circulated in sustainable loops, but also wealth, knowledge, technology and power is circulated and redistributed throughout society”

Circular Society Definition

„ A circular society defines discourses with a vision of circularity where not only resources are circulated in sustainable loops, but also wealth, knowledge, technology and power is circulated and redistributed throughout society”



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.

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Circular Society

CE vs. CS - Typology

	Holistic	Segmented
Optimist	<p>Reformist Circular Society</p> <ul style="list-style-type: none"> <i>Assumptions:</i> reformed form of capitalism is compatible with sustainability and socio-technical innovations can enable eco-economic decoupling to prevent ecological collapse. <i>Goal:</i> economic prosperity and human well-being within the biophysical boundaries of the earth. <i>Means:</i> technological breakthroughs, social innovations and new business models that improve ecological health, resource security, and material prosperity for all. 	<p>Techcentric Circular Economy</p> <ul style="list-style-type: none"> <i>Assumptions:</i> capitalism is compatible with sustainability and technological innovation can enable eco-economic decoupling to prevent ecological collapse. <i>Goal:</i> sustainable human progress and prosperity without negative environmental externalities. <i>Means:</i> economic innovations, new business models and unprecedented breakthroughs in CE technologies for the closing of resource loops with economic value creation.
Sceptical	<p>Transformational Circular Society</p> <ul style="list-style-type: none"> <i>Assumptions:</i> capitalism is incompatible with sustainability and socio-technical innovation cannot bring absolute eco-economic decoupling to prevent ecological collapse. <i>Goal:</i> a world of conviviality and frugal abundance for all, while fairly distributing the biophysical resources of the earth. <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. 	<p>Fortress Circular Economy</p> <ul style="list-style-type: none"> <i>Assumptions:</i> there is not alternative to capitalism and socio-technical innovation cannot bring absolute eco-economic decoupling to prevent ecological collapse. <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. <i>Means:</i> innovative technologies and business models combined with rationalized resource use, imposed frugality and strict migration and population controls.

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

- 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
- 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

Exercise 05 - Feedback

- Proposals:
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 - **“Capping the workweek at 20 hours whilst increasing real wages”**
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→ John Maynard Keynes predicted a 15h work week in his 1930 essay *“Economic Possibilities for our Grandchildren”*



Detour

Bullshit Job - Definition

Detour

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„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.“

Detour

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„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.“

→ 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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- Duct tapers: Temporarily fix problems that could be fixed permanently, e.g., programmers repairing bloated code, airline desk staff who calm passengers whose bags do not arrive

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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

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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

Bullshit Jobs - Why?

- Assumption → Capitalism does not allow for inefficiencies
- Hypothesis → "Managerial feudalism" instead of capitalism

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
- Prosperity from technological advances (e.g., emerging technologies which were supposed to give us a 15h work week) has been reinvested into industry and consumer growth instead of leisure time
- Bullshit jobs also serve political ends, in which political parties are more concerned about having jobs than whether the jobs are fulfilling. In addition, he contends, populations occupied with busy work have less time to revolt

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

EXERCISE E07

Exercise E07

Circular Economy vs. Circular Society

- L08 slide 31 details the circularity discourse typology (CE vs. CS). Which of the four categories do you prefer and/or deem to be more likely and why?
- 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?