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The Roger Federer of automobiles
meets the Mercedes-Benz of tennis.



Transition Now (Part 1) November 4th 2020

Overconsumption, the climate emergency and the scientific community - why is it so hard to talk about?

Professeure Julia Steinberger

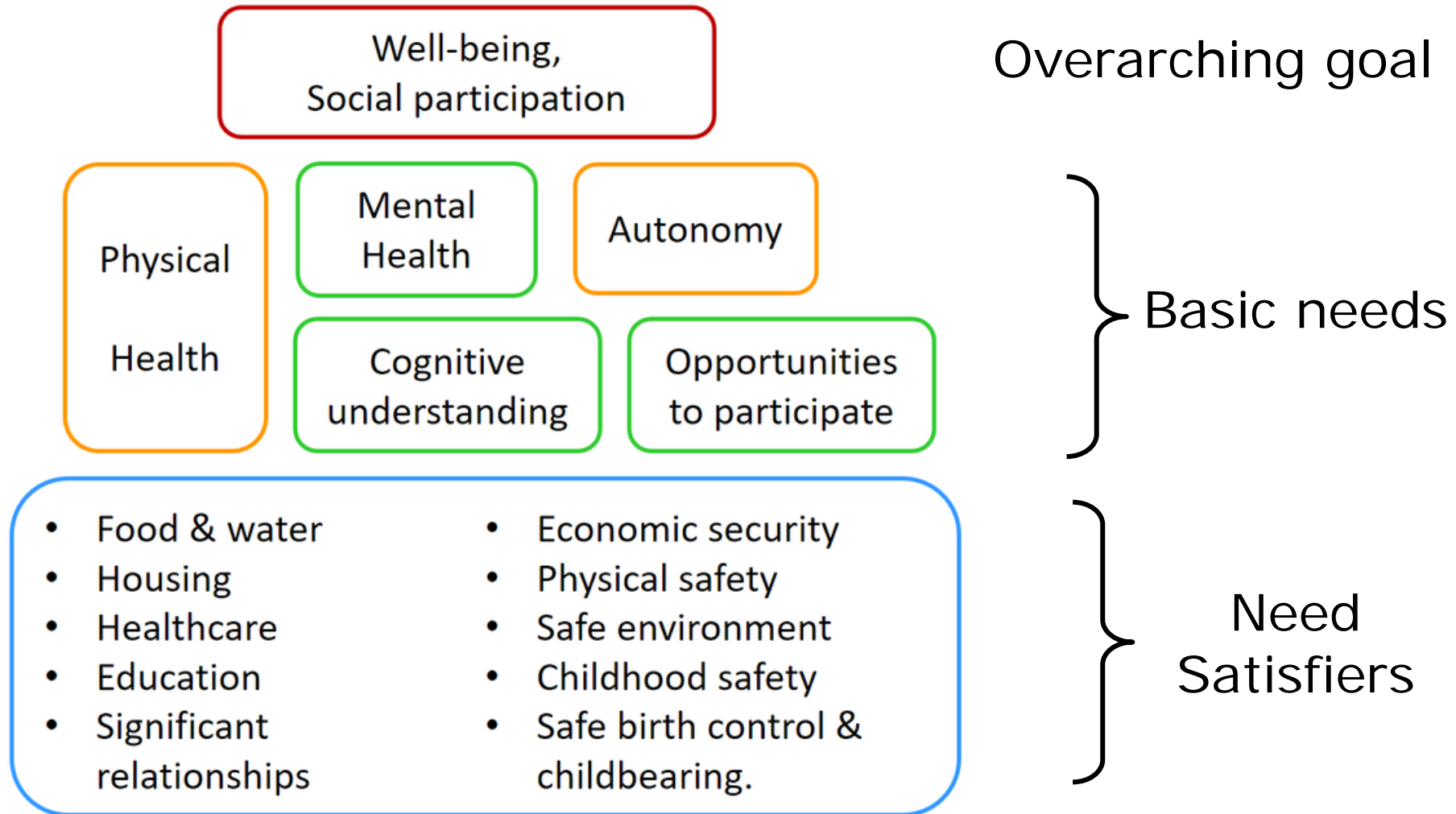
Institut de Géographie et Durabilité, Faculté des Géosciences et de l'Environnement

Contents

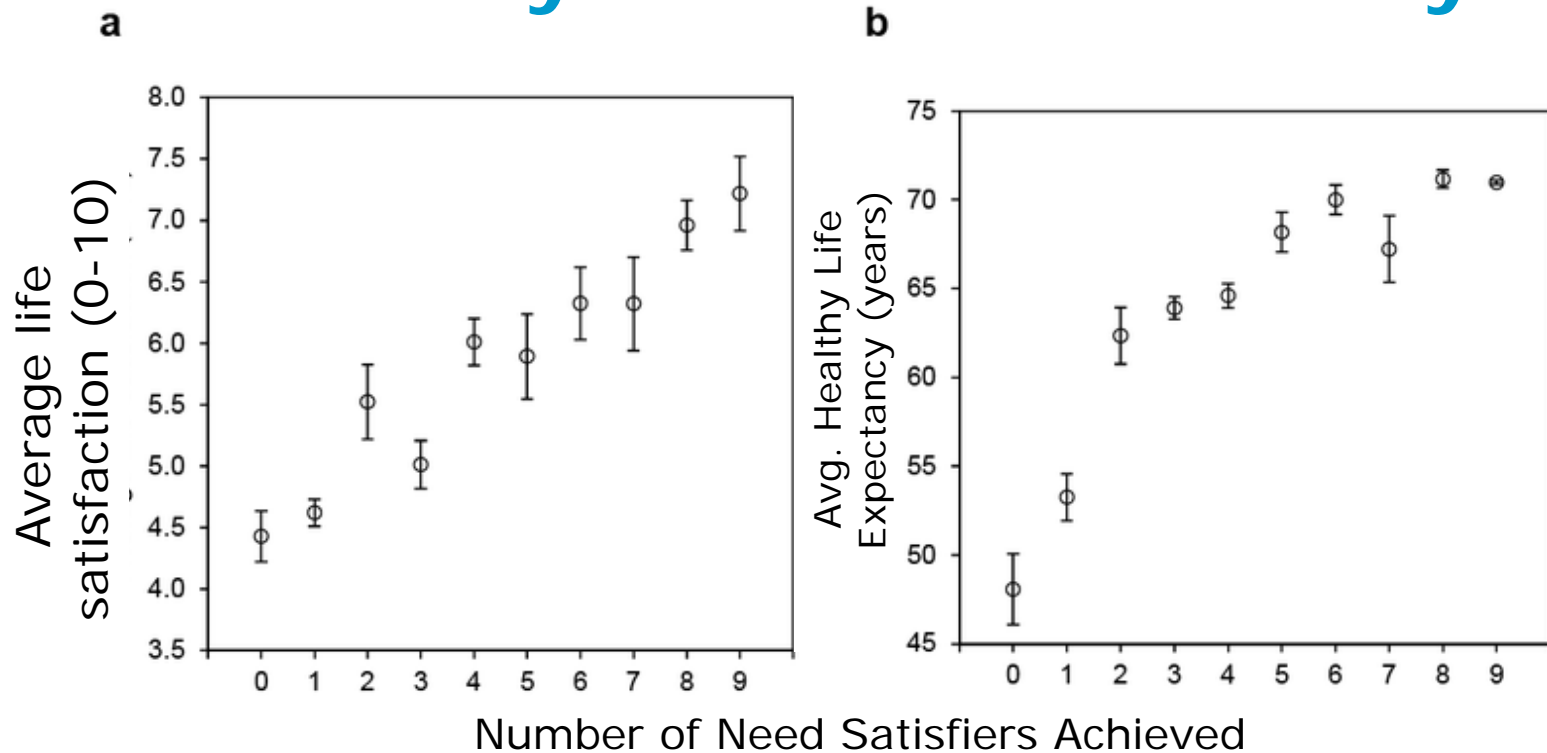
1. Living Well Within Limits: what does it mean?
2. Modelling “Decent Living Energy”
3. Criticizing consumption: why it’s so important, and why it’s so hard.

1. Living Well Within Limits: what does it mean?





Nice theory! What about reality?



Supplementary Fig. 1. Average values of (a) life satisfaction, and (b) healthy life expectancy, for countries based on the number of needs-related social thresholds achieved. Error bars give the standard error of the mean. The countries included are the same as in Fig. 2 of the main text ($N = 109$).

How to study it: the Living Well Within Limits Framework

BIOPHYSICAL INPUTS

Planetary Processes

Hydrological cycle,
Carbon cycle,
Solar radiation,
Biodiversity,
Nitrogen cycle,
Etc.

Natural Resources

Energy,
Materials,
Land,
Water,
Etc.

PROVISIONING SYSTEMS

Physical

Infrastructure,
Technology,
Land use,
Supply Chains.

Social

State,
Markets,
Communities,
Institutions,
Norms,
Culture,
Distribution.

SOCIAL OUTCOMES

Need satisfiers

Food & water,
Housing,
Healthcare,
Education,
Relationships,
Economic security,
Physical safety,
Childhood safety,
Safe birth control & childbearing.

Well-being

Physical & mental health,
Autonomy of agency,
Cognitive understanding,
Social participation,
Life satisfaction,
Etc.

2. Can we live well within planetary boundaries?



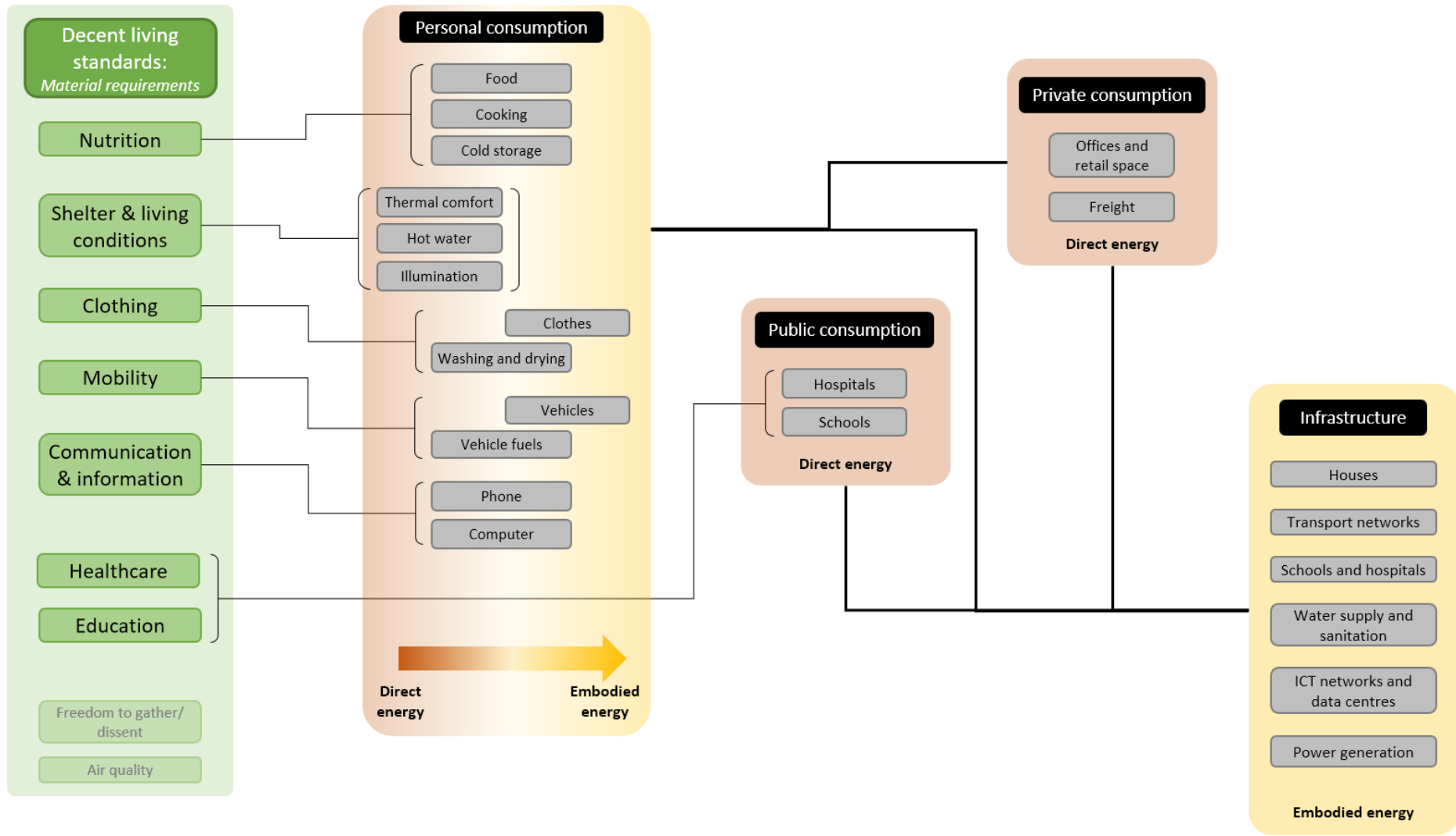


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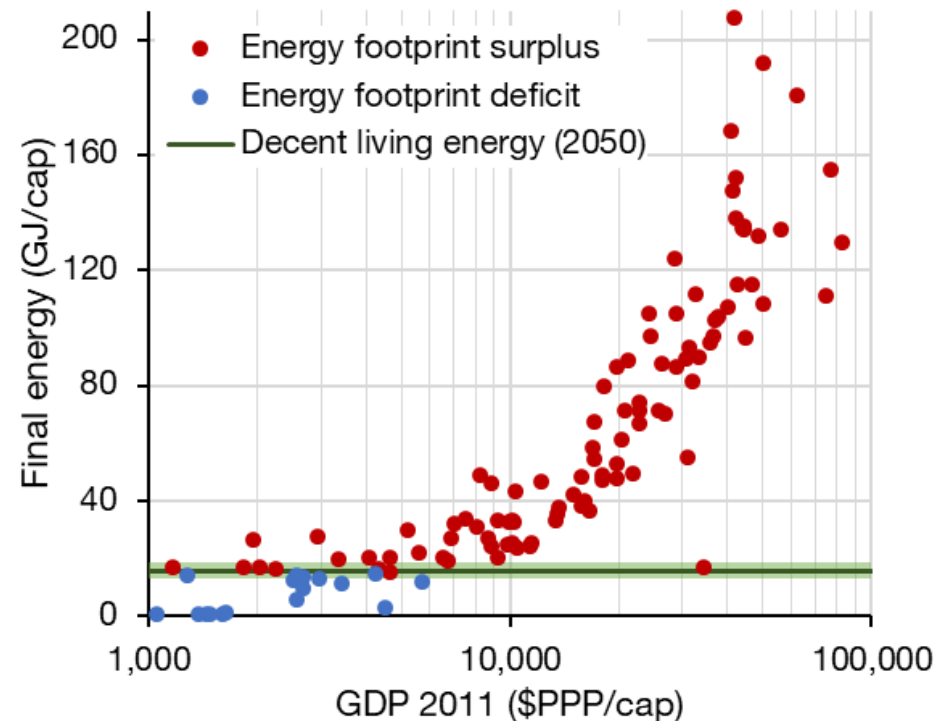
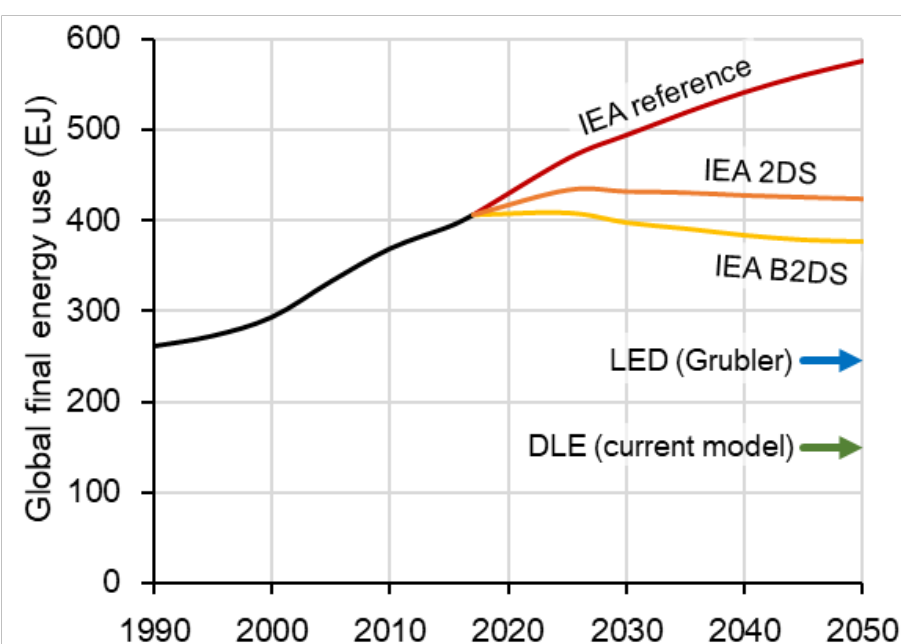
Can we use this to imagine and model a different future?

- Yes, based on “Decent Living Energy” of Professor Narasimha Rao of Yale University.
- This theory links, in a pragmatic way, human need satisfaction and minimum levels of core energy services.
- Our global model takes into account
 - **technological** improvements (efficiency)
 - **equal** human need satisfaction (sufficiency)
 - **degrowth** of energy demand (overconsumption).

Global Decent Living Energy Model

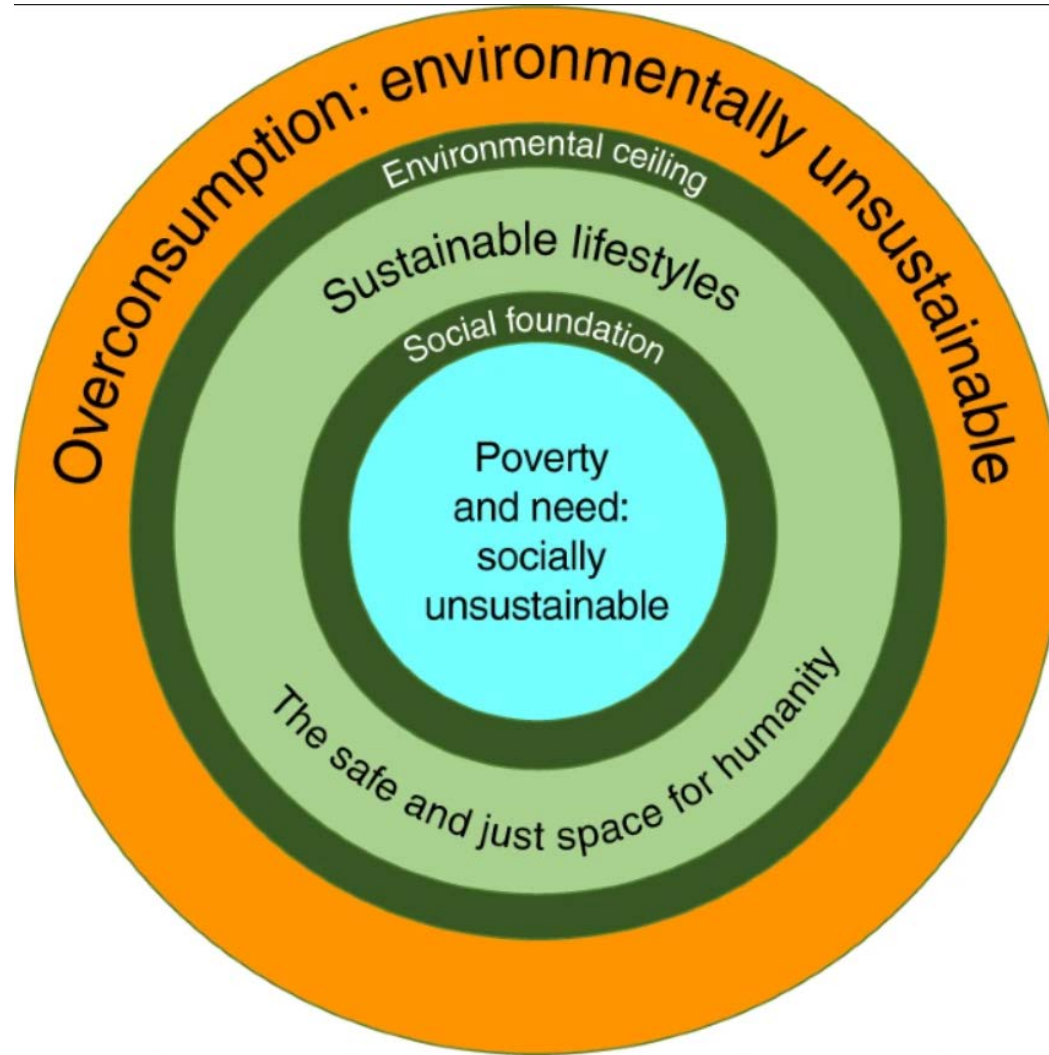


Results from our Global Decent Living Energy Model



Sufficient energy for universal human need satisfaction in 2050 would be possible at 40% of our current consumption despite population growth.

3. Criticizing Consumption





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Inter- and intra-national inequality in energy footprints

nature
energy

ARTICLES

<https://doi.org/10.1038/s41560-020-0579-8>

Check for updates

Large inequality in international and intranational energy footprints between income groups and across consumption categories

Yannick Oswald , Anne Owen and Julia K. Steinberger

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Climate change: The rich are to blame, international study finds

By Roger Harrabin
BBC environment analyst

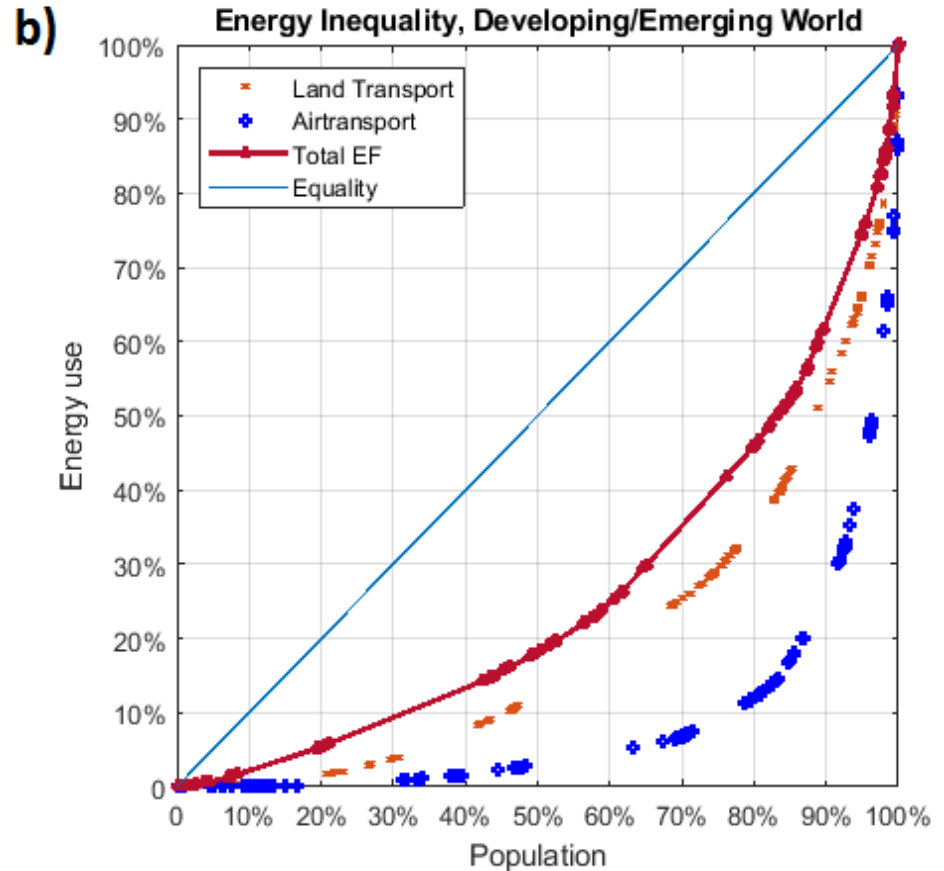
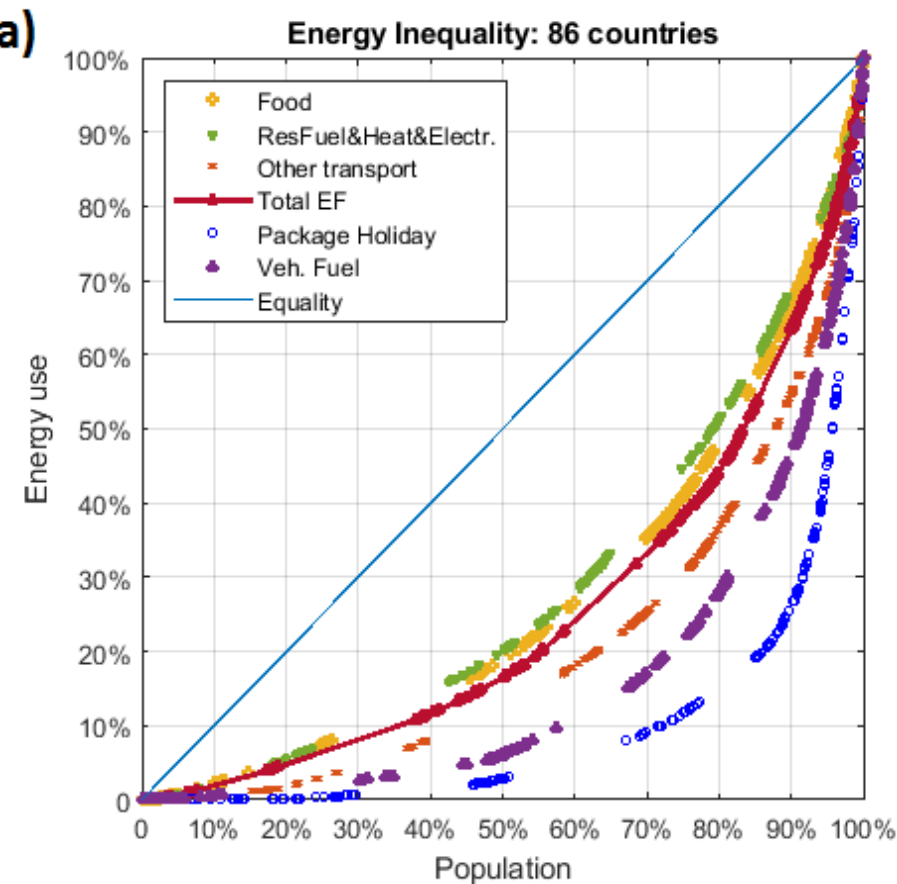
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12

Oswald, Owen & Steinberger, 2020, Nature Energy

Inter- & intra-national inequality across product groups



Scientists' warning on affluence

Thomas Wiedmann , Manfred Lenzen, Lorenz T. Keyßer & Julia K. Steinberger

Nature Communications **11**, Article number: 3107 (2020) | [Cite this article](#)

118k Accesses | **17** Citations | **4008** Altmetric | [Metrics](#)

- Overconsumption is designed in by states, industries and markets (necessary as outlet for growth: lack of low-consumption alternatives, advertising etc).
- Positional consumption: the affluent drive consumption norms and aspirations.
- Existence & survival in unequal neoliberal economies compels overconsumption (private vehicles, time saving appliances)

Table 1 Meta approaches for sustainable prosperity.

	Radical approaches		Reformist approaches	Green growth approach
Sub-group	Eco-socialism (incl. degrowth)	Eco-anarchism	A-growth, precautionary/ pragmatic post-growth, steady- state economy, prosperity and managing without growth	Sustainable growth, ecological modernisation, decoupling
Key references	47,50,51,59,65	54,87	42,52,80,85,86	28,78,79
Key premise/principle/ hypothesis/assumptions	<ul style="list-style-type: none"> Decoupling is most likely not possible Necessary changes are most likely not compatible with capitalism The democratic state is expected to play a significant role in the transition and beyond, although grassroots movements are still important 	<ul style="list-style-type: none"> Decoupling is most likely not possible Necessary changes are most likely not compatible with capitalism The state is not expected to play a significant role in the transition. Instead, grassroots participatory-democratic movements are central in the transition and beyond 	<ul style="list-style-type: none"> Group 1: infinite growth on a finite planet (decoupling) is most likely not possible (Daly, Victor or Jackson) Group 2: agnostic to growth; decoupling could still be possible; uncertainty (van den Bergh, Petschow et al.) Necessary changes are compatible with centralised states and capitalism 	<ul style="list-style-type: none"> Economic growth can be decoupled from environmental impacts and is necessary to provide sustainable technical solutions. Necessary changes are compatible with centralised states and capitalism
Goals/aspirations	Decouple wellbeing from GDP growth, shrink impacts and expect GDP shrinkage, increase social control over economy using the state	Decouple wellbeing from GDP growth, shrink impacts and expect GDP shrinkage, increase social control over economy without using the state	Decouple wellbeing from GDP growth, shrink impacts despite possible/likely GDP decrease	Maintain high economic growth and decrease impacts (decoupling)
Mechanisms	Focus on resource limits, system change and wellbeing	Focus on resource limits, system change and wellbeing	Focus on resource limits, reforms and wellbeing	Focus on resource efficiency, renewable energy and decoupling
Institutions/actors	Governments, civil society and grassroots initiatives, voters, scientists	Civil society and grassroots initiatives, scientists	Governments, civil society and grassroots initiatives, voters, scientists	Governments, financial institutions, voters, scientists,
Actions	Include strong limits and social justice in policies; Change economic structures, reform institutions and increase social control over economic actions; change lifestyles, consciousness and cultures through grassroots action	Change lifestyles, cultures and consciousness through grassroots action; Build alternative localised participatory-democratic economic system besides old one and remove barriers through cooperating with governments	Include strong limits and social justice in policies; reform important social institutions; change lifestyles and cultures through grassroots action	Adapt policies to include increases in efficiencies
Achievements/examples /implementations	Individual downshifting, transition initiatives, eco-villages, policy reforms e.g. the 2019 Wellbeing Budget in New Zealand as a very first step	Individual downshifting, transition initiatives, eco-villages, Catalan Integral Cooperative, Rojava, Zapatistas	Individual downshifting, transition initiatives, eco-villages, policy reforms, e.g. the 2019 Wellbeing Budget in New Zealand as a first step	OECD and EU policies
Barriers	Lack of awareness among the public of limits to growth and alternatives; lack of research on these alternatives; changes could be too radical to be implemented; growth imperatives of states could be too much a barrier	Lack of awareness among the public of limits to growth and alternatives; lack of research on these alternatives; changes could be too radical to be implemented; barriers to grassroots action could be too high	Lack of awareness among the public of limits to growth and alternatives; lack of research on these alternatives; potential that problems cannot be solved within capitalism and centralised states	Priority still on economic growth
Alignment with dominant interests, systems and cultures	Low	Low	Low (Group 1) to medium (Group 2)	High

Conclusions?

- Very important to engage not only with how to resolve climate change (equity, efficiency, sufficiency, economic democracy ...)
- But how to understand why so little is being done.
- Only by exposing production-consumption & lock-in mechanisms from political economy perspectives do we have a chance of success.
- Need far more economics of all stripes to become involved.