

Degrowth, Green Growth, and A-Growth

an Argumentation Analysis



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Conceptual Remarks



- **Discourse about the right means for a socio-ecological transformation**
 - Keeping environmental goals (e.g. Planetary Boundaries)
 - without violating principles of social justice
- **What is the right economic strategy:**
 - **Degrowth:**
 - the amount of marketed goods and services as measured by GDP ought to be reduced in early industrialized, wealthy countries.
 - **Green Growth:**
 - GDP ought to grow further also in wealthy countries but be composed differently thereby generating less environmental impact



1. Degrowth Arguments from Justice

1. Reconstruction of deductively valid arguments
2. Discussion of its premises

2. Green Growth Arguments from Justice

1. Reconstruction of the argument from justice
2. Discussion of its premises

3. Reasoning under uncertainty about strategies for socio-ecological transformation

Degrowth: Ecological Argument from Justice: its Structure



1. The amount of the environmental pollution produced by the wealthy countries is intergenerationally and globally unjust.
2. Reduction of environmental pollution is not compatible with further economic growth.
3. Thus: Principles of justice require that the economic systems in the wealthy countries do not grow further.

**Normative
Premise**

**Descriptive
Premise**

**Preliminary
Conclusion
(Ideal Justice)**

Ecological Argument form Justice: its Structure



1. Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals (e.g. that the planetary boundaries are kept).
2. Reduction of environmental pollution is not compatible with further economic growth.
3. Thus: Principles of justice require that the economic systems in the wealthy countries do not grow further.

**Normative
Premise**

**Descriptive
Premise**

**Preliminary
Conclusion
(Ideal Justice)**

Impossibility-of-Decoupling Argument



– **Descriptive Premise: Impossibility claim**

- It is impossible that the wealthy countries will reduce their environmental pollution in a sufficient amount and that their GDP/capita will not be substantially reduced.

Formal Structure: impossible (p and non-q)

Equivalent: necessarily (if p then q)

- If wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will necessarily generate a substantially lower GDP/capita.

Impossibility-of-Decoupling Argument (Ideal Version)



- 1. Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals.**
- 2. If wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will necessarily generate a substantially lower GDP/capita.**
- 3. Thus: Principles of intergenerational and global justice require that the economies of the early industrialized, wealthy countries generate a substantially lower GDP/capita.**

Normative Premise
[Justice requires
that p]

Descriptive Premise
[Necessarily (if p
then q)]

Preliminary Conclusion
[Justice requires that q]

Impossibility-of-Decoupling Argument: Is it sound?



- **The argument is deductively valid.**
- **Is it also sound?**
 1. Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals (e.g. that the planetary boundaries are kept).
 2. **If wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will necessarily generate a substantially lower GDP/capita.**
 3. Thus: Principles of intergenerational and global justice require that the economies of the early industrialized, wealthy countries generate a substantially lower GDP/capita.

Can we justify this claim?

Justifications for the impossibility of decoupling claim (1)



- **Non-renewable resources are depletable**
- **Observed productivity growth rates not sufficient**
 - Does not justify the **impossibility** claim

Justifications for the impossibility of decoupling claim (1)



- **Non-renewable resources are depletable**
 - Conceptual Failure:
 - Says nothing about growth of economic value
- **Observed productivity growth rates not sufficient**
 - Fallacy in modal reasoning:
 - From the fact that we have not observed p so far does not follow that p is not possible

Justifications for the impossibility of decoupling claim (2)



- **IPAT-Modeling:**
 - $I(\text{mpact}) = P(\text{opulation}) * A(\text{ffluence}) * T(\text{echnology})$
 - $[\text{Resources}] = [\text{Population}] * [\text{BIP/capita}] * [\text{Resources/BIP}]$
- **Ward et al. (2016):**
 - Calibrate the model according to the past growth rates
 - Assume:
 - „extremely optimistic“ future growth rate for Technology
 - Result:
 - even under the optimistic assumptions resources consumption rises.
- **Author's conclusion:**
 - „growth in GDP ultimately cannot plausibly be decoupled from growth in material use“ (Ward et al. 2016, 10)

Justifications for the impossibility of decoupling claim (2)



- **Author's conclusion:**
 - „growth in GDP ultimately cannot plausibly be decoupled from growth in material use“ (Ward et al. 2016, 10)
- **The conclusion is fallacious:**
 - Verificationist Fallacy (Betz 2016):
 - Modelling results verify (at its best) some possible developments, i.e.
 - Claims: „it is possible that p“
 - From the verification of the claim „it is possible that p“ it is fallacious to conclude that „it is not possible that non-p“.
 - Ward et al:
 - Show that under high growth rates for technology resources consumption still grows.
 - They cannot exclude that technology growth rates cannot be higher than they assume.

Incredibility-of-Decoupling Argument



– Descriptive Premise: Incredibility claim

- It is incredible or unrealistic that the wealthy countries will reduce their environmental pollution to a sufficient degree and that their GDP/capita will not be substantially reduced.

Formal Structure: not-realistic (p and non-q)

Equivalent: realistic (if p then q)

- Realistically, if the wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will generate a substantially lower GDP/capita.

Incredibility-of-Decoupling Argument (Ideal Version)



1. **Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals (e.g. that the planetary boundaries are kept).**
- 2*. **Realistically, if the wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will generate a substantially lower GDP/capita.**
- 3*. **If justice requires that p and (it is realistic that if p then q) then justice requires that q.**
4. **Thus: Principles of intergenerational and global justice require that the economies of the early industrialized, wealthy countries generate a substantially lower GDP/capita.**

Normative
Premise

Descriptive
Premise

Formal
Principle

Preliminary
Conclusion

Incredibility-of-Decoupling Argument: is it sound?



- The argument is deductively valid
- Is it sound?
 1. Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals (e.g. that the planetary boundaries are kept).
 - 2*. Realistically, if the wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will generate a substantially lower GDP/capita.
 - 3*. If justice requires that p and (it is realistic that if p then q) then justice requires that q.
 4. Thus: Principles of intergenerational and global justice require that the economies of the early industrialized, wealthy countries generate a substantially lower GDP/capita.

Are these
premises true?

Justification of the Incredibility Argument: the Dilemma



- **Soundness of the argument depends on the meaning of „realistic“:**
 - 2*. **Realistically**, if the wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will generate a substantially lower GDP/capita.
 - 3*. If justice requires that p and (it is **realistic** that if p then q) then justice requires that q.
- Two extreme explications:
 - Realistic in the sense of „high reliability“
 - Realistic in the sense of „verified possibility“

Justification of the Incredibility Argument: the Trade-off



2**. **It is highly reliable that**, if the wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will generate a substantially lower GDP/capita.

3**. If justice requires that p and (it is **highly reliable** that if p then q) then justice requires that q.

(2**) is not justified;

(3**) is true;

2***. **It is possible that**, if the wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will generate a substantially lower GDP/capita.

3***. If justice requires that p and (it is **possible** that if p then q) then justice requires that q.

(2***) is true;

(3***) is false

Reliability Claim: why is it not justified? (1)



- **Jackson (2009):**
 - Required CO₂-intensity decline of 7-9% annually;
 - Observed CO₂-intensity decline: <1% annually (since 1990)
- **Ward et al. (2016):**
 - Even under „extremely optimistic“ decline rates of resource intensity no reduction of resources consumption
 - Don't these results justify the claim that it is highly unreliable that decoupling will happen?

Reliability Claim: why is it not justified? (2)



- **The unreliability claim is justified by inductive reasoning:**
 - Historical evidence does not support the claim that decoupling will succeed, therefore it is unreliable that it will happen.
- **Problem:**
 - The relevant parameters are politically influenceable:
 - Material, CO₂-, energy intensity
 - Their development can be influenced by political instruments
 - It will not be surprising if the decline rates of these parameters will jump discretely in the next years.

Degrowth Premises



- 1. Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals (e.g. that the planetary boundaries are kept).**

- 2***. It is possible that if the wealthy countries reduce their environmental pollution in a sufficient amount then their economic systems will generate a substantially lower GDP/capita.**

Normative Premise

[Justice requires that p]

Descriptive Premise

[it is possible (if p then q)]

Green Growth Argument



- **Normative Premise:**

- Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals AND
- There is a normative requirement that the GDP in wealthy societies grows further.

- **Descriptive Premise:**

- Compatibility of further economic growth and reduction of environmental pollution.

- **Preliminary Conclusion:**

- It is normatively required that economies grow further and environmental pollution be reduced.

Green Growth Argument



- **Normative Premise:**

- Principles of intergenerational and global justice require that the wealthy countries reduce their environmental pollution in an amount that it becomes compatible with global environmental goals AND
- There is a normative requirement that the GDP in wealthy societies grows further.

- **Descriptive Premise:**

- Compatibility of further economic growth and reduction of environmental pollution.

- **Preliminary Conclusion:**

- It is normatively required that economies grow further and environmental pollution be reduced.

Green Growth: Possibility of Decoupling



- **Usual claim*:**

- 2-GG*** Only if **GG measures** are implemented it is highly reliable that the **GDP** in the wealthy countries will further grow and their environmental pollution will be sufficiently reduced.

- **Justification of (2-GG):**

- Economic-ecological models:

- Systems Dynamics Models (UNEP 2011);

- General Equilibrium Models (Jaeger 2011)

- Assumption: GG measures implemented (additional investment, CO2-certificates caps)

- Modeling results: GDP grows further and environmental targets kept

Green Growth: Possibility of Decoupling



– Problem:

- It is fallacious to derive the preliminary conclusion from these premises:
 - i. It is normatively required that (p and q).
 - ii. If GG then it is possible that (p and q).
 - iii. Does not follow: It is normatively required that GG.

GG: Reliability of Decoupling (1)



– **GG advocates need a stronger decoupling claim:**

2-GG* Only if GG measures are implemented **it is highly reliable** that the GDP in the wealthy countries will further grow and their environmental pollution will be sufficiently reduced.

– **Deductively valid argument results:**

- i. It is normatively required that (p and q).
- ii. It is highly reliable that (if p and q then GG)
- iii. If it is normatively required that p and (it is **highly reliable** that if p then GG) then it is normatively required that GG.
- iv. Thus: it is normatively required that GG.

GG: Reliability of Decoupling (2)



2-GG* Only if GG measures are implemented **it is highly reliable** that the GDP in the wealthy countries will further grow and their environmental pollution will be sufficiently reduced.



(2-GG*) is not justified;

– Why is (2-GG*) not justified?

- The used models (General Equilibrium; Systems Dynamics) are too simple and many relevant parameters are uncertain.
 - They verify possible developments at its best
 - They do not justify that these developments are highly reliable.

GG-Argument: Dilemma



- **GG-Dilemma:**
 - Possibility of Decoupling:
 - Descriptive premise (2-GG) is true but
 - argument deductively not valid;
 - Reliability of Decoupling:
 - Argument is valid but
 - descriptive premise (2-GG*) not justified.

Agreement among Degrowth and Green Growth proponents



- **Normative Assumption:**
 - Principles of justice require that wealthy countries reduce their environmental pollution.
- **Descriptive Possibility Claims:**
 - Possibility of decoupling:
 - It is possible that the wealthy countries will further grow and that their environmental pollution will be reduced in an amount that it becomes compatible with global environmental goals.
 - Possibility that decoupling does not succeed:
 - It is possible that the wealthy societies will reduce their environmental pollution to a sufficient degree and within a sufficient time frame only if they substantially reduce their GDP/capita.

A-Growth: Decision under Uncertainty



– Precautionary Principles

- Idea: choose that strategy that would lead to less harm in the worst possible case
 - Degrowth and Green Growth are not comparable with regard to the worst possible consequences
 - GG worst case: Decoupling does not succeed, future generations harmed by environmental change.
 - Degrowth worst case: Transformation of social systems does not succeed, today's generations harmed due to collapsed welfare states.

A-Growth: Decision under Uncertainty



- **Justification of a degrowth strategy:**
 - Controllability principle
- **Idea of the argument:**
 - Degrowth as well as Green Growth strategies can lead to tremendous harm.
 - Difference between Degrowth and GG strategies:
 - Degrowth strategies require radical social change
 - GG strategies require radical technological change
 - These strategies differ with regard to controllability
 - If the required social change is better controllable than the technological change, then this would provide a reason for Degrowth strategies.

A-Growth: Decision under Uncertainty



- **Justification of a degrowth strategy:**
 - Hazard for justice
- **Idea of the argument:**
 - Degrowth as well as Green Growth strategies can lead to tremendous harm.
 - Difference between Degrowth and GG strategies:
 - Degrowth:
 - the current economic system is responsible for tremendous injustices
 - They cannot be addressed within the current economic system
 - Normative Idea for Degrowth:
 - It is worthy to risk a radical social change because the possible gains are that important.

Thank You

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References



- Betz, G. (2016). Fallacies in scenario reasoning. Discussion Paper Nr. 2. Institute of Technology Futures, Karlsruhe. Download under: <https://doi.org/10.5445/IR/1000055841>
- Bowen, A. and C. Hepburn (2014, sep). Green growth: an assessment. *Oxford Review of Economic Policy* 30 (3), 407–422.
- Jackson, T. (2009). Prosperity without growth. Technical report, Sustainable Development Commission.
- Jacobs, M. (2012). Green growth: Economic theory and political discourse. Centre for Climate Change Economics and Policy Working Paper No. 108.
- Jaeger, C. C., L. Paroussos, D. Mangalagiu, R. Kupers, A. Mandel, and J. D. Tabara (2011a). A new growth path for Europe. Generating prosperity and jobs in the low-carbon economy. Technical report, European Climate Forum.
- Kallis, G. (2011): In defence of degrowth. *Ecological Economics* 70 (5), 873–880.
- Martinez-Allier, J. et al. (2010): Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm. *Ecological Economics* 69 (9), 1741–1747.
- Muraca, B. (2012): Towards a fair degrowth-society: Justice and the right to a 'good life' beyond growth. *Futures* 44 (6), 535–545.
- UNEP (2011). Towards a green economy: Pathways to sustainable development and poverty eradication. Technical report, United Nations Environmental Programme.
- Ward, J. D., P. C. Sutton, A. D. Werner, R. Costanza, S. H. Mohr, and C. T. Simmons (2016, oct). Is decoupling GDP growth from environmental impact possible? *PLOS ONE* 11(10), 1–14.