



MARTIN-LUTHER-UNIVERSITY HALLE-WITTENBERG

Faculty of Law and Economic Sciences
Chair of Economic Ethics
Prof. Dr. Ingo Pies

Ethics and Economics of Institutional Governance

Lecture 7
Winter Term 2025/26

Overview

Ethics and Economics of Institutional Governance: 14 Lectures (L)

Introduction (L 1)

1. The Ordonomic Approach (L 2 + 3)
2. The Social Structure of Modern Society (L 4 + 5)
3. The Semantics of Modern Society (L 6)
4. Societal Learning Processes for the Reciprocal Adaptation of Social Structure and Semantics (L 7 + 8 + 9)
5. Case Study on Climate Policy (L 10 + 11)
6. Applications: The Ordonomic Line of Argumentation (L 12 + 13)

Summary and Outlook (L 14)



What have we learned?

The most important lessons of the sixth lecture are:

- Semantics are important because action is guided by thinking.
- Rational irrationality means that people are attached to their beliefs and that they are willing to incur costs for remaining faithful to their beliefs. Correcting incorrect beliefs depends on the feedback mechanism – that is, the cost you have to bear individually if your beliefs are faulty. That is why there are systematically more false beliefs on political issues than on economic issues.
- Moral ideas are not sacrosanct, certainly not in politics. Here they must be able to be measured by the criterion of expediency: whether they are suitable for aligning the social processes functionally.
- Kling distinguishes four semantics: (a) the progressive semantics of exploitation and oppression, (b) the conservative semantics of civilization versus barbarism, (c) the libertarian semantics of individual freedom versus state coercion, and (d) the populist semantics of locally rooted ordinary citizens versus cosmopolitan globalized elites.
- All four semantics invite you to tradeoff thinking. They require orthogonal positioning if mutual understanding and democratic consensus-building is to succeed across party lines.
- Hayek criticizes the "social justice" category, arguing that it is inappropriate for a market economy because market results are typically not-intended. He formulates the downstream argument that the consequences of "social justice" are antisocial and unjust.

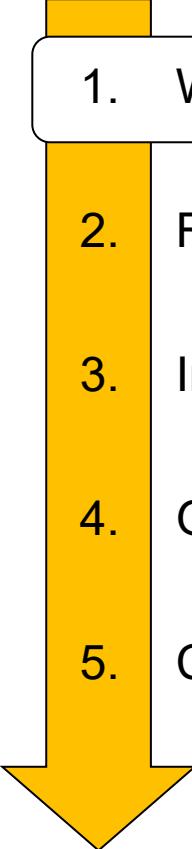


Structure of Today's Lecture

1. Tradeoff thinking as a problem
2. What triggers tradeoff thinking in the environmental field?
3. Reaction analysis: Deconstruction of the perpetrator-victim scheme
4. Interaction Analysis: The consumers' dilemma
5. Growth analysis: Environmental protection through innovation
6. Sustainability Semantics
7. Material for David Deutsch (2011), Chapters 9 and 17

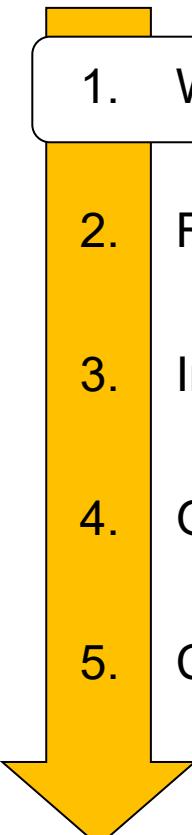


Structure of Next Lecture

- 
1. What triggers tradeoff thinking in the social field?
 2. Reaction analysis: possible misconduct due to misincentives
 3. Interaction analysis: The dilemma of the insured
 4. Growth Analysis: Baumol's Cost Disease
 5. Case Study: Kidney transplantation



Structure of Next Lecture but One

- 
1. What triggers tradeoff thinking in the technology sector?
 2. Reaction analysis: On the criticism of the precautionary principle
 3. Interaction analysis: The dilemma of innovators
 4. Growth analysis: On the diffusion of innovation effects
 5. Case Study: Glyphosate

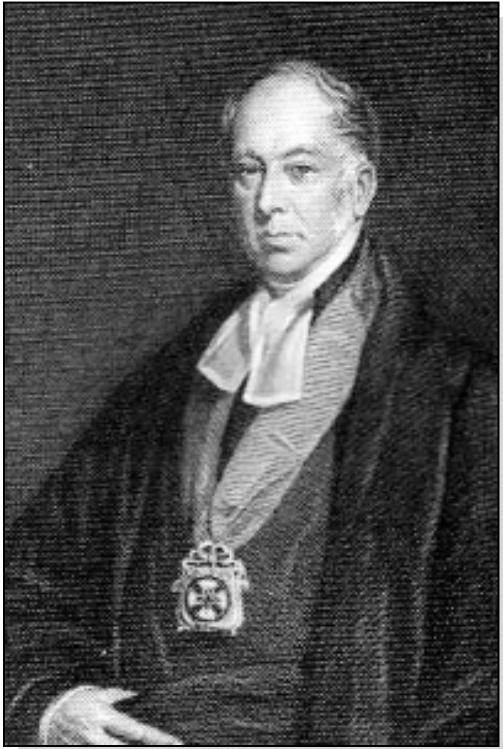


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Bischof Whately on Selfishness



<https://goo.gl/33OlyK>

*Richard Whately
(1787-1863)*

Richard Whately (1787-1863):
Bishop of Dublin, theologian and logician

„A man is called selfish, not for pursuing his own good, but for neglecting his neighbours‘.“

Richard Whately (1864, 1865; Apophthegm No. 26, p. 3.)



Criticism of Selfishness

Marie von Ebner-Eschenbach (18. September 1830; † 12. March 1916): Austrian writer.
Her aphorisms were first published in 1880.*



<http://images.zeno.org/Literatur/l/big/ebnerpor.jpg>

„Dealing with an egoist is so dangerous because self-defense is gradually forcing us to fall into his mistake.“

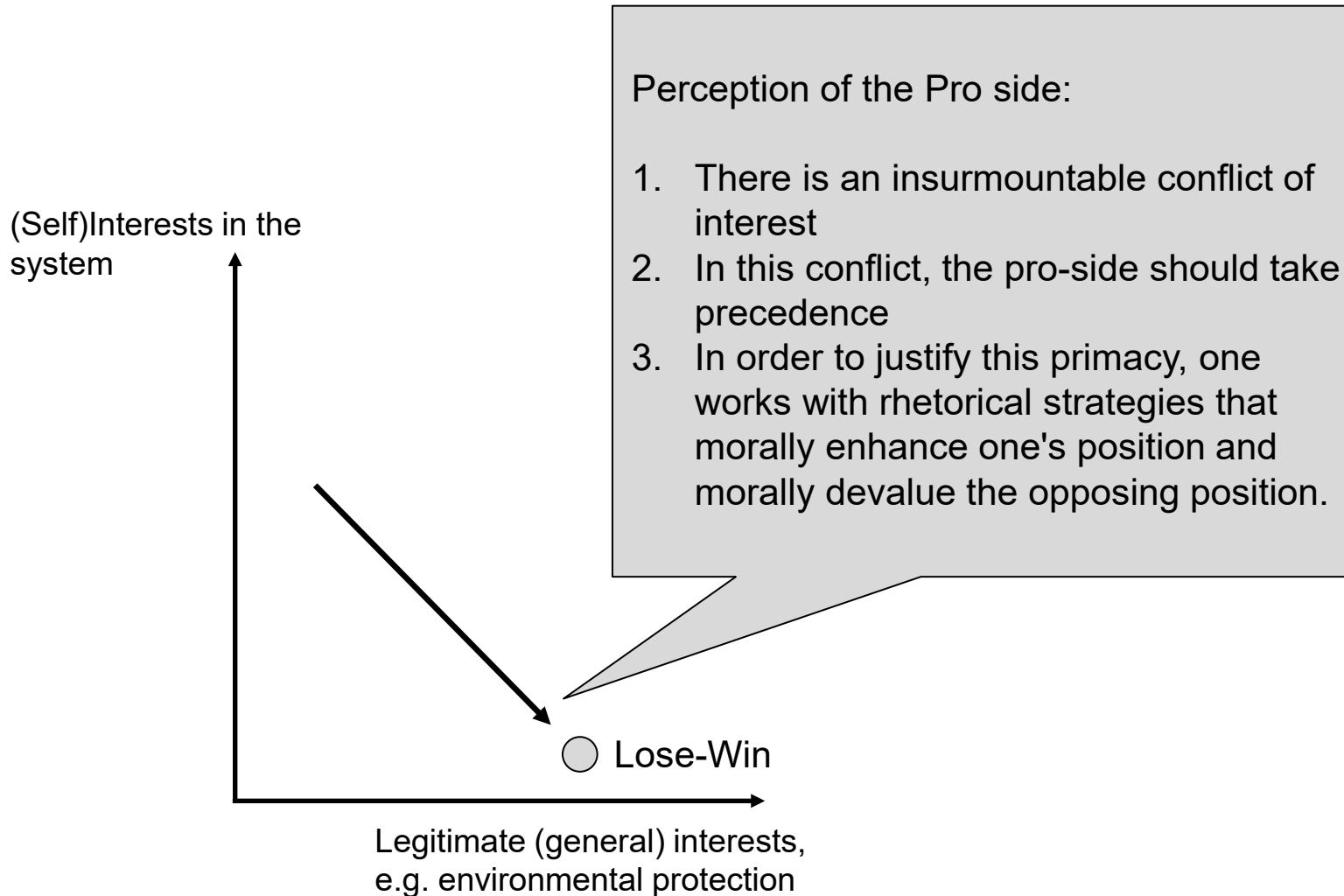
Marie von Ebner-Eschenbach (1880, 1939): Aphorismen, Frankfurt a.M., p. 34.



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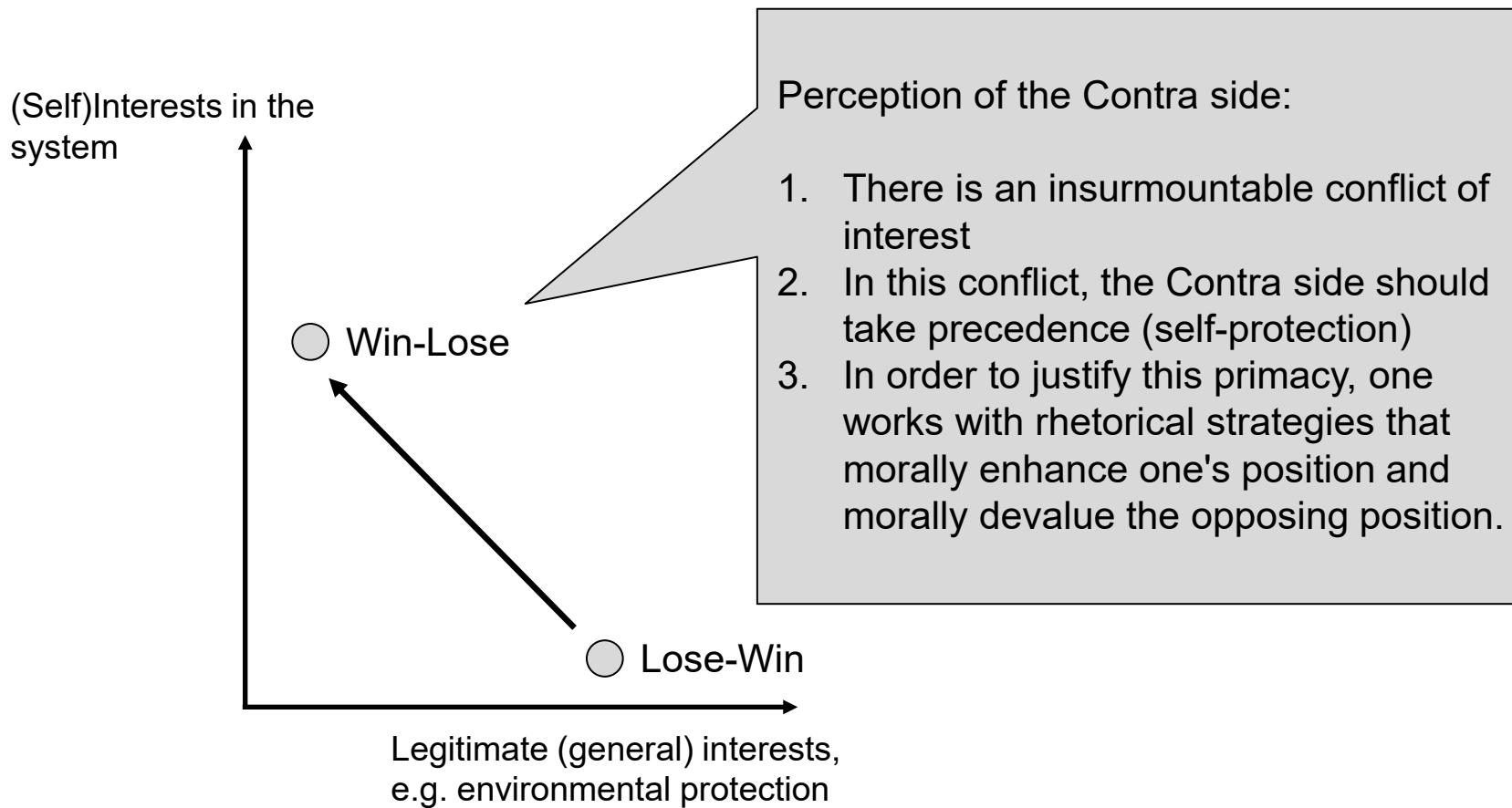
Problems of Tradeoff Thinking (I)

Tradeoff thinking acts like a kind of selfishness towards the other side.



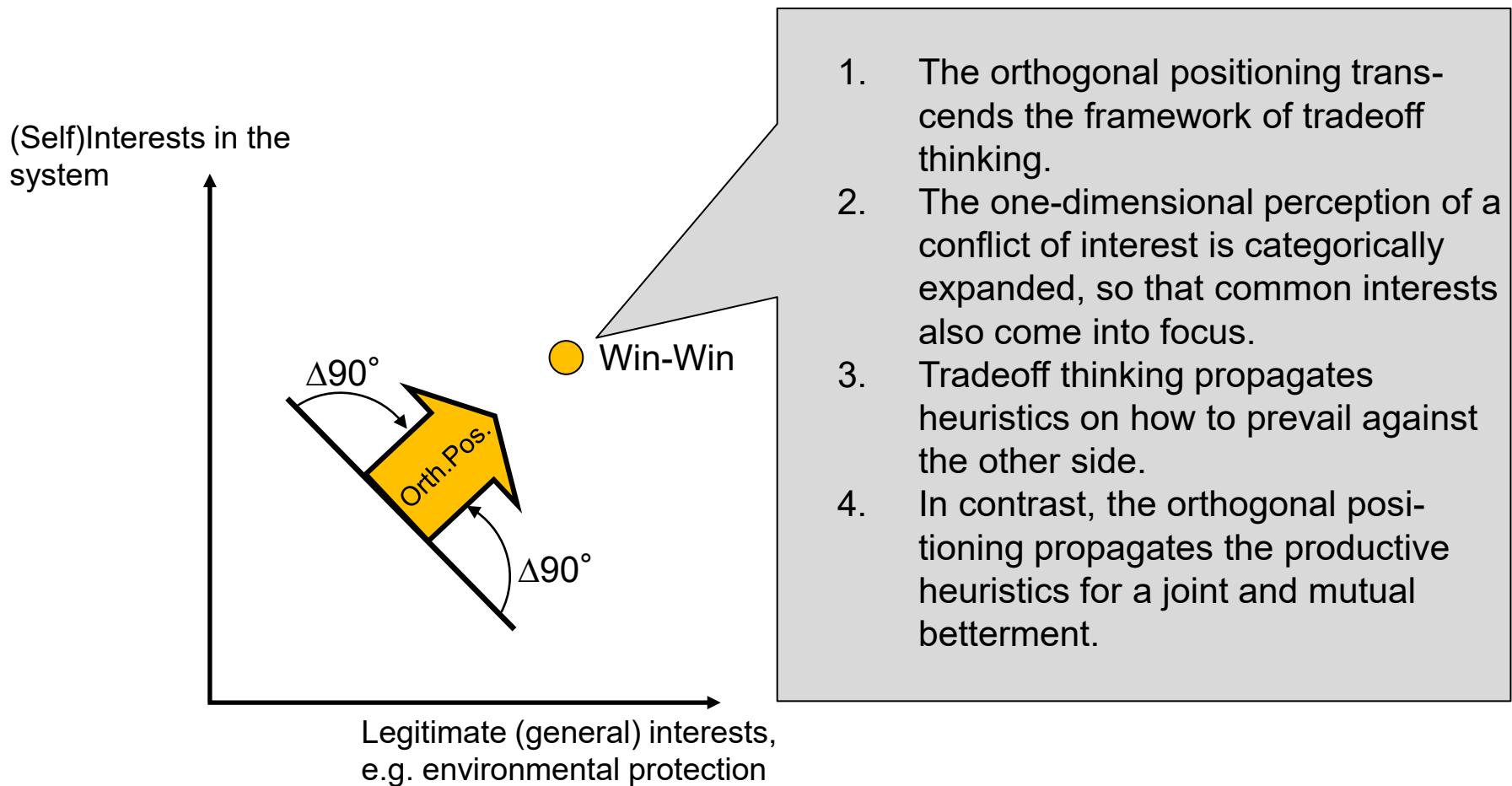
Problems of Tradeoff Thinking (II)

Tradeoff thinking triggers the opposite side to react in cynical ways that resemble selfishness.



Problems of Tradeoff Thinking (III)

Tradeoff thinking invites all participants to pursue win-lose strategies. This solidifies conflicts. The productive alternative is an "orthogonal positioning": a 90° change in the direction of thinking that brings about a reorientation towards win-win solutions.



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Environmental Problems Trigger the Moral Harm-Button

With Jonathan Haidt (2012) we distinguish six moral dimensions: (1) care/harm, (2) fairness/cheating, (3) loyalty/betrayal, (4) authority/subversion, (5) sanctity/degradation and (6) liberty/oppression. Environmental problems are mainly addressed by the first dimension. That is why they are perceived within the scheme of good and evil, especially in the scheme of victims and perpetrators, of friends and enemies.

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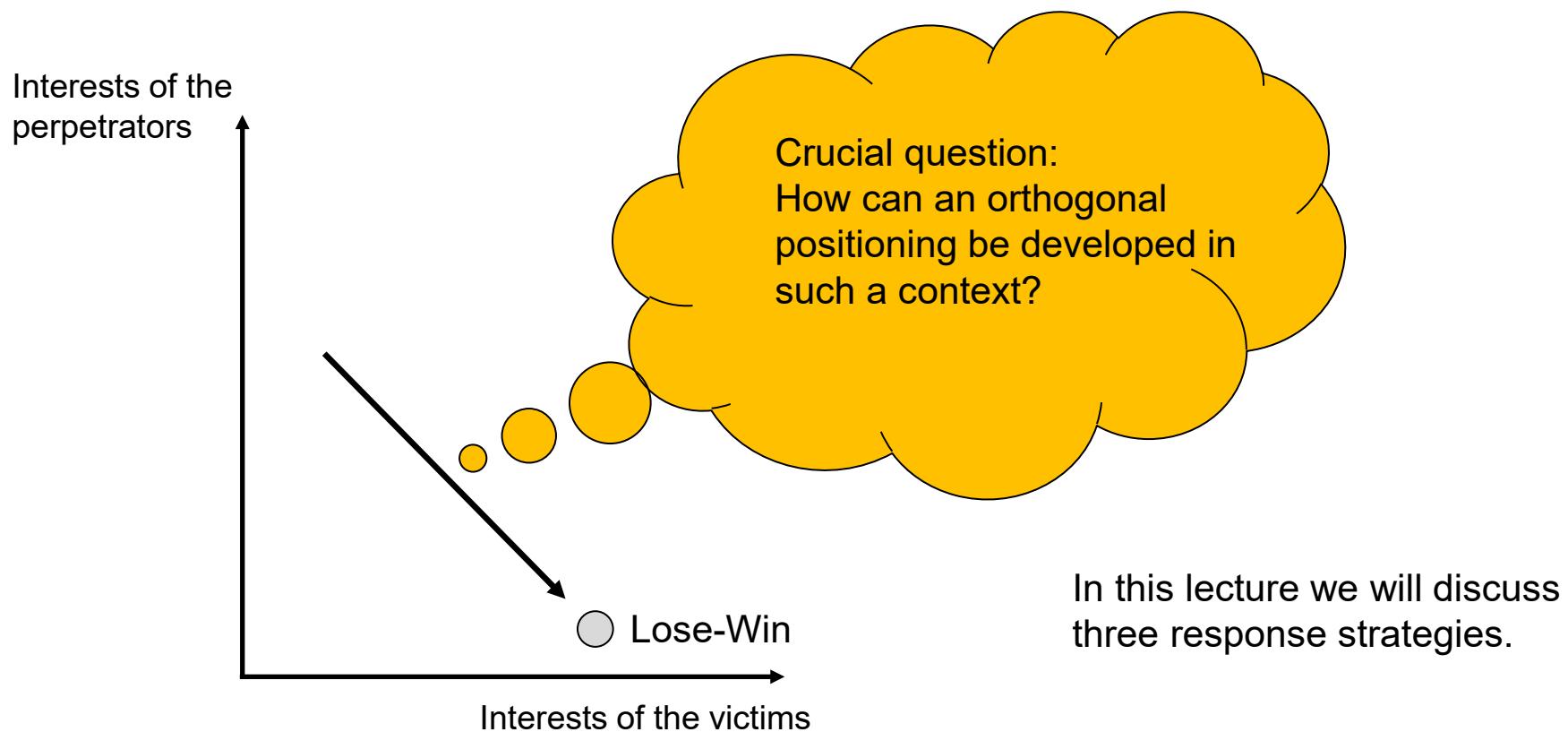


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The Perception Framework for Environmental Issues

The "harm-button" activates tradeoff thinking and suggests that the moral solution requires "win-lose", especially sacrificing economic interests. As a consequence, economic actors often react with cynicism – and above all: with resistance.



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Ronald Coase Deconstructs the Perpetrator-Victim Scheme

In his groundbreaking essay "The Problem of Social Cost", Ronald Coase (1960) writes:



Ronald Coase
(1910-2013)

„The question is commonly thought of as one in which A inflicts harm on B and what has to be decided is: how should we restrain A? But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm to B would inflict harm on A. The real question that has to be decided is: should A be allowed to harm B or should B be allowed to harm A?“

Coase (1960; p. 2)



Graphical Illustration (I)

First of all, we reproduce the perception of everyday life: an emission harms local residents. Here good and evil seem to be as plain as a pikestaff. Everyday understanding tends towards an asymmetrical causal attribution: externalities cause damage.



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**ex ante:
Idyll**



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Prof. Dr. Ingo Pies



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<https://pixabay.com/de/illustrations/aquarell-farbe-tinte-malerei-2045917/>

**ex post:
Negative externalities**

Graphical illustration (II)

Now we are turning the perception of everyday life around: without a settlement, there are no victims. If the settlement is added, a conflict arises over how to use scarce resources. We are therefore dealing with a problem of scarcity which is caused symmetrically.



<https://pixabay.com/de/illustrations/luftverschmutzung-wasserverschmutzung-3409934/>

ex ante:
No one is harmed



<https://pixabay.com/de/illustrations/luftverschmutzung-wasserverschmutzung-3409934/>



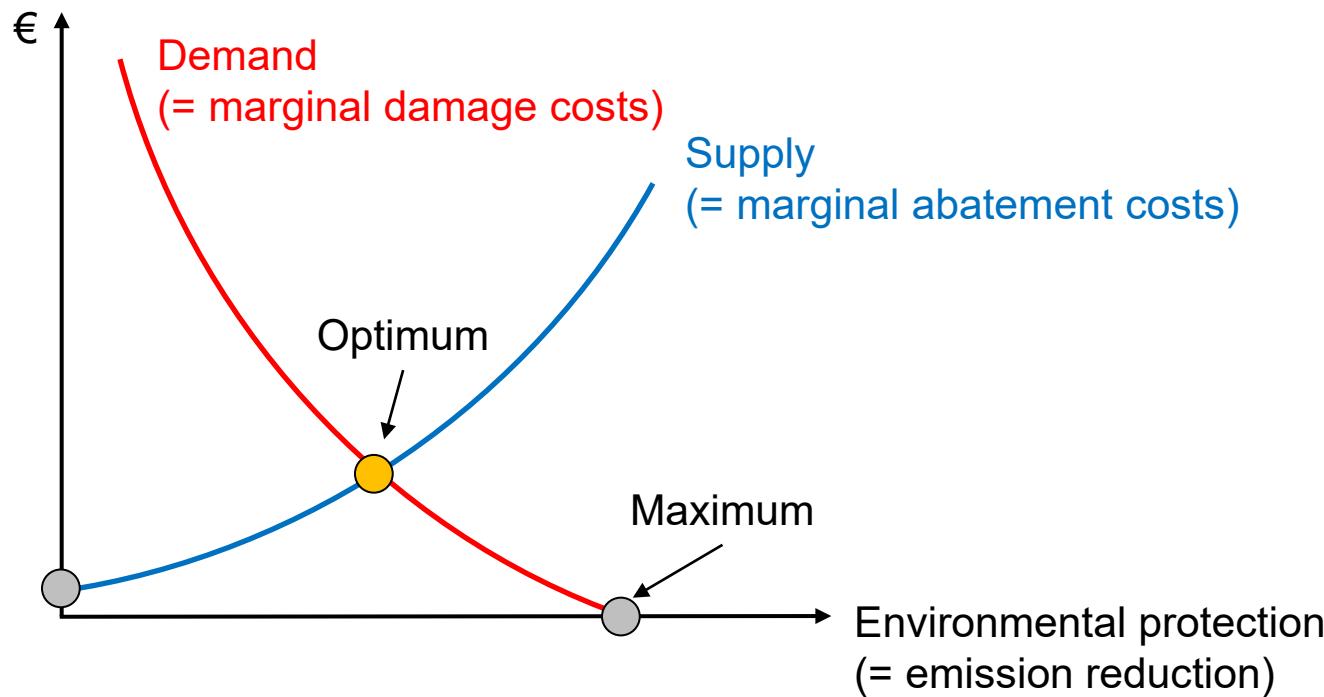
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ex post:
Conflict of (reciprocal) scarcity



Economic Translation

Everyday thinking tends to consider only demand, not the supply of environmental protection. This confuses maximum and optimum. As a consequence, the discourse becomes prejudiced. Correction: The opportunity costs of environmental protection must also be taken into account!



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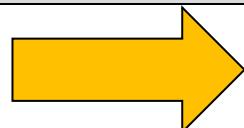
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Market Failure versus Political Failure (I)

Public discourse often assumes that there is a conflict between ecology and economy. Then "the economy" is the bogeyman. What can we make of this?

- Companies trigger negative externalities (noise, dirt, exhaust gases, etc.).
- This means that they cause costs that are not shown in the product price.
- Ultimately, this is due to a deficit in the ownership order.
- Sometimes such a problem can be solved dynamically through innovation.
- From a static point of view, however, this problem is insoluble for companies because they are under competition. Therefore, they cannot afford voluntary environmental protection if the additional costs are not offset by additional revenue.
- The problem could easily be solved if consumers were willing to pay the full price. Companies would then be compensated for the marginal abatement costs of their environmental protection efforts.
- However, consumers are stuck in the many-sided prisoners' dilemma (2-PD): Confronted with the question of whether one wants to voluntarily take on additional costs, every consumer has an incentive to go on free-riding, even if this is associated with collective self-harm.



This is where politics is called for! Politics has the task of equipping the market with an appropriate framework of institutionalized incentives.

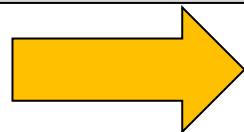


Market Failure versus Political Failure (II)

How can this market failure be remedied?

Beyond the solution through entrepreneurial innovation, there are four options:

1. The state subsidizes the environmental efforts of companies, so that the taxpayers bear the costs of negative externalities
2. The state taxes the negative externalities of companies, and these pass on the costs to consumers
3. The state taxes consumers and thus reduces their demand for products that exert negative externalities
4. The state awards property rights, so that the consumption of scarce resources is provided with market prices, which are reflected in the cost calculus of companies, who then pass on these costs to consumers

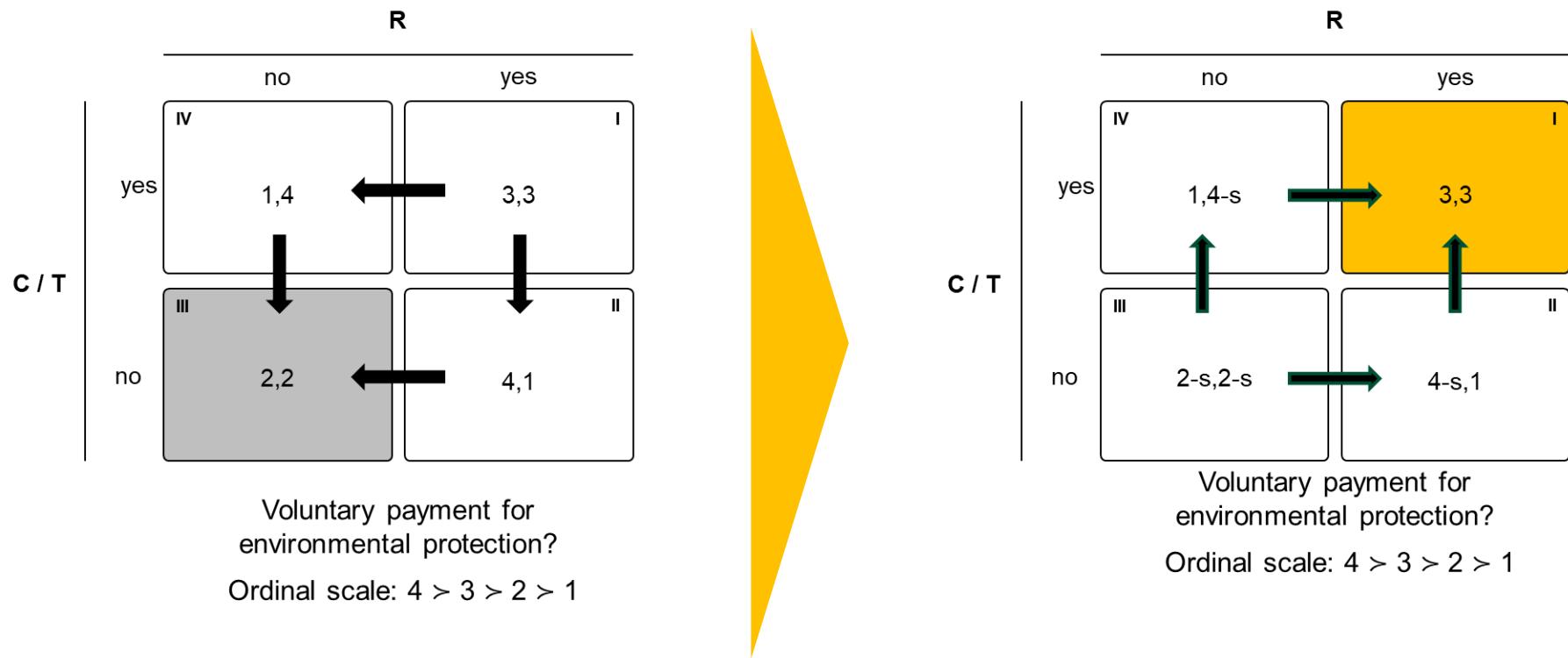


The logic: Market solutions for environmental protection can only be achieved if companies are compensated for the according costs!



The Social Dilemma

To put it differently: Market solutions can only be achieved if either taxpayers (T) or consumers (C) bear the costs. (Hint: R = rest of the group). In both cases, the state plays an important role: either directly or indirectly, via simulating or stimulating market prices. This introduces a negative sanction (s) on environmental damage, thus making it more costly.



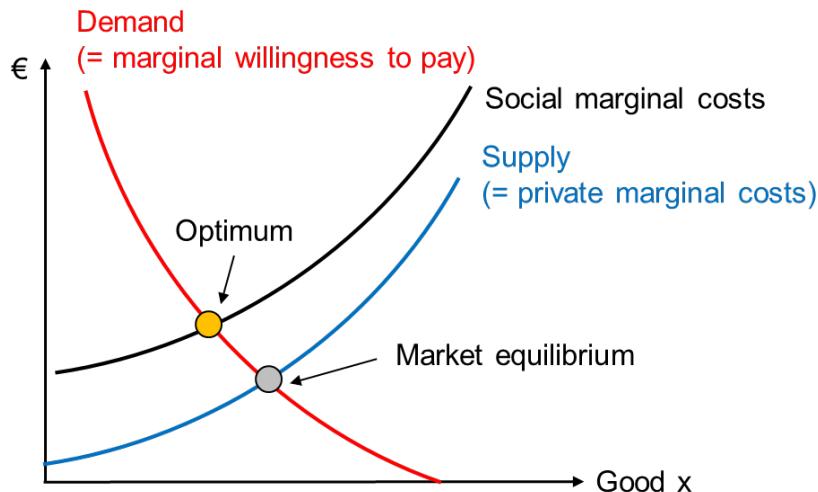
Eigene Darstellung



Graphical Illustration in the Market Diagram

How do the four options affect supply and demand?

1. The state subsidizes the environmental efforts of companies, so that the taxpayers bear the costs of negative externalities
2. The state taxes the negative externalities of companies, and these pass on the costs to consumers
3. The state taxes consumers and thus reduces their demand for products that exert negative externalities
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- Option 1: Supply curve shifts upwards
Option 2: Supply curve shifts upwards
Option 3: Demand curve shifts downwards
Option 4: Supply curve shifts upwards

Logic:
Market equilibrium is approaching the optimum.



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Greta Thunberg

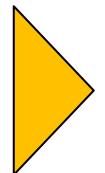
With the "Fridays for Future" (F4F) movement she initiated, Greta Thunberg makes vociferous demands to tackle climate change effectively.



Greta Thunberg

„People are suffering. People are dying. Entire ecosystems are collapsing. We are in the beginning of a mass extinction. And all you can talk about is the money and the fairy tales of eternal economic growth. How dare you?“

Greta Thunberg at the UN Climate Action Summit in New York on 23.9.2019 (Video: <https://www.youtube.com/watch?v=TMrtLsQbaok>)



Ordonomic question:
What is the concept of growth that is assumed here?

https://media.nu.nl/m/u2mxltzaq8jp_wd1280.jpg/greta-thunberg-houdt-emotionele-speech-tijdens-vn-top

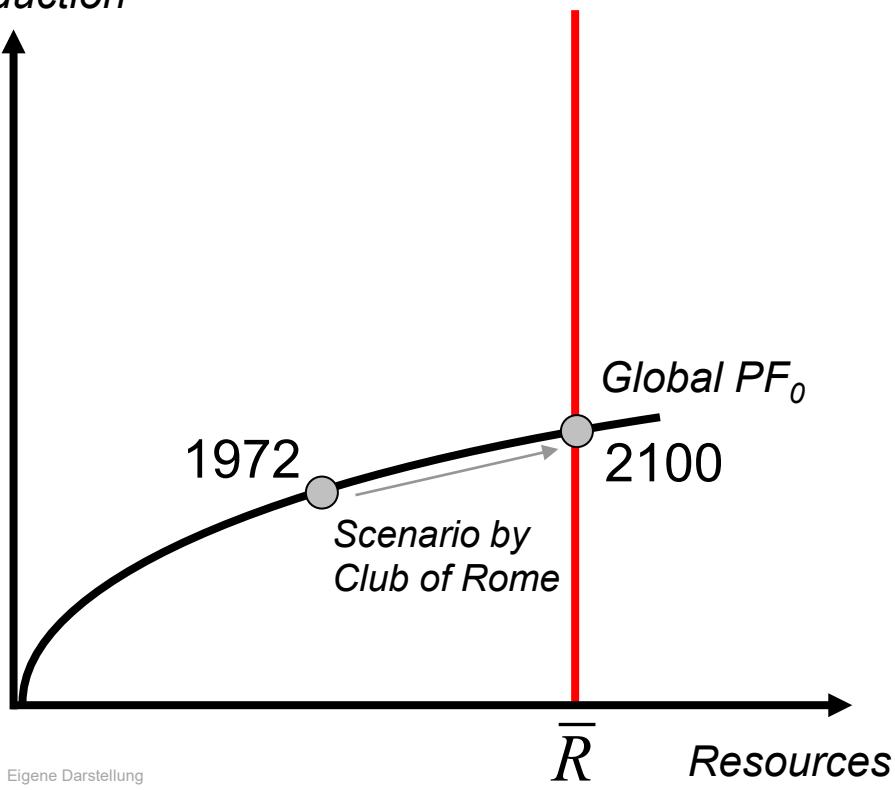


The Perspective of the Club of Rome

The semantics of "limits to growth" warn against excessive resource consumption.

Paradigmatic for this is the report to the Club of Rome by Meadows et al. (1972). They assume "extensive" growth: more output through more input.

Worldwide
Production



The Club of Rome interprets "growth" as a movement along the global production function (PF_0).

It is feared that there is a critical level (\bar{R}) of resource utilization (red line).

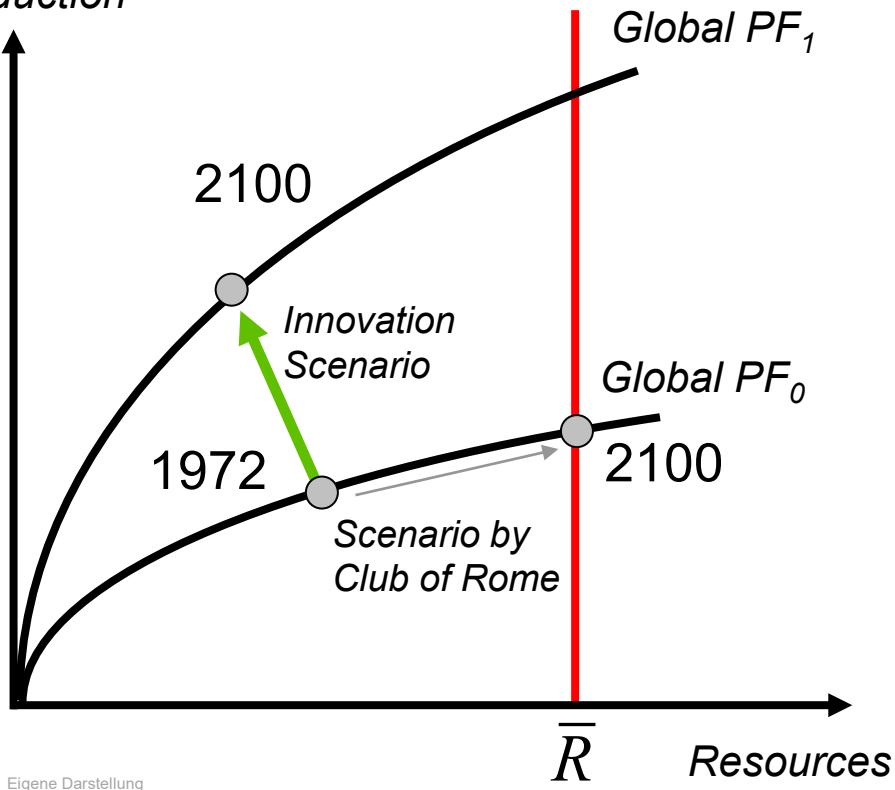
Underlying idea: „Growth“ has "limits" because it is essential to prevent the red line from being crossed.



Change of Perspective towards "growth of limits"

Growth is knowledge-driven. It is created by innovation. These innovations shift the production function. Therefore, environmental problems can be solved through "intensive" growth, i.e. through innovative win-win arrangements.

Worldwide
Production



"Growth" should not be interpreted as a movement along the global production function, but as a **shift** of the production function ($PF_0 \rightarrow PF_1$)

That's why "intensive" growth has the option of conserving resources. In this respect, what is at stake is really a 'growth of limits' along the **green arrow**.



Propositions

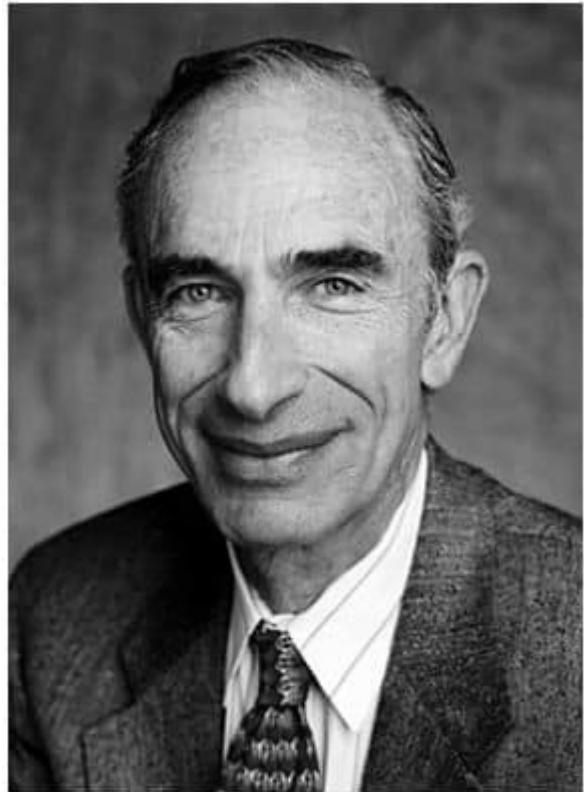
In modern society, (semantic) blockades of thought lead to (social-structural) blockades of action.

- a In terms of ecology, many basic games in modern society are dilemmatic. Consequently, there is an interest in the realization of win-win potentials.
- b The semantics of the "limits to growth" blind to the possibility of solving social problems through innovation.
- c But this is precisely where a socio-structural analysis can open the eyes for functional or dysfunctional innovation competition.
- d Change of perspective: From the "limits to growth" to "growth of limits" in order to focus public attention on innovative solutions!



The Bet between Ehrlich and Simon (I)

Paul R. Ehrlich, born 1932, is a professor of biology at Stanford University. He is one of the representatives of the thesis that planet Earth suffers from overpopulation.



<https://swh-826d.kxcdn.com/wp-content/uploads/2010/12/Paul-R-Ehrlich.jpg>

„The battle to feed all of humanity is over. In the 1970's and 1980s hundreds of millions of people will starve to death in spite of any crash programs embarked upon now. At this late date nothing can prevent a substantial increase in the world death rate, although many lives could be saved through dramatic programs to "stretch" the carrying capacity of the earth by increasing food production ... But these programs will only provide a stay of execution unless they are accompanied by determined and successful efforts at population control. Population control is the conscious regulation of the numbers of human beings to meet the needs not just of individual families, but of society as a whole.“

Ehrlich (1968): The Population Bomb, Prologue, p. xi



The Bet between Ehrlich and Simon (II)

Julian Simon (1932–1998), economist and professor of business administration at the University of Maryland, saw an increasing world population not primarily as a problem, but as a solution.



„Adding more people causes problems, but people are also the means to solve these problems. The main fuel to speed our progress is our stock of knowledge, and the brake is our lack of imagination. The ultimate resource is people – skilled, spirited, and hopeful people who will exert their wills and imaginations for their own benefit, and inevitably they will benefit not only themselves but the rest of us as well.“

Julian Simon (1996): The Ultimate Resource 2, Conclusion, p. 589.

Bildquelle: <http://www.juliansimon.org/images/jsimon.gif>,
Zugriff am 09.05.2019



Ehrlich and Simon – A Clash of Visions

A juxtaposition of the works by Paul Ehrlich and Julian Simon shows that both represent very different worldviews.

- Ehrlich assumes that population growth and the associated increase in consumption lead to an environmental collapse.
- The expected consequences are resource depletion, food shortages and famine.
- Population control and consumption limits are necessary to avert such catastrophes: 'limits to growth'!
- Simon represents the counter-thesis: people as rational beings are able to free themselves from bottleneck situations through innovations.
- Knowledge and creativity are the most important resources.
- Population growth leads to problems only in the short term. In the long run, the positive effects for humanity will dominate when there are more heads.



Simon challenges Ehrlich

After both scientists had long persisted in public disputes during the 1970s, Simon challenged his opponent Ehrlich to a bet.



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http://www.periodensystem.info/download/periodensystem_1120.gif



Bildquelle: <https://www.luftbilder.de/wp-content/themes/twenty sixteen/images/cart.png>

- Ehrlich should choose a basket of raw materials that he expected to become scarcer and therefore more expensive in the coming years.
- For the bet, the inflation-adjusted prices should be calculated. If at the end of the period the real price was higher than at the beginning, Ehrlich would win the bet. Simon, on the other hand, suspected that the real price would fall.
- The respective bets should correspond to the price difference of the shopping cart at the beginning and end of the time period.
- Ehrlich chose chromium, copper, nickel, tin and tungsten for a period of 10 years (September 29, 1980 - September 29, 1990).
-



The Result of the Bet and Public Reactions

Ehrlich lost the bet and settled his debts. However, the public reaction to the result was mixed.



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- Despite an increase in the population by 873 million people, the value of the basket's goods fell by 57.6%. Ehrlich then sent Simon a cheque for \$576.07.
- Supporters of Ehrlich's worldview insist to this day that Simon was only lucky. They agree that the result of the bet would have been different if you had chosen a different period.
- Economists Michael Cox and Richard Alm calculated that Ehrlich's basket was 22.4% lower in 2015 than it was in 1980. If you calculate the real prices taking into account working hours, it can be seen that the value has actually fallen by 41.8% and Simon would have won the bet for every period between 1980 and 2015.



Resource Availability – A New Measurement Method

The Cox and Alms method for calculating working time prices can be applied to all baskets of goods.

- The exact amount of resources in the world is still unknown. However, the volume of resources is not immutable (e.g. drinking water).
- Therefore, in order to analyze resource availability, one should not concentrate on the physical quantities. Instead, one should compare real resource prices over the appropriate time horizon.
- Gale L. Pooley and Marian L. Tupy developed the Simon Abundance Index in 2018 under these assumptions.

Quelle: Pooley, Gale L. und Marian L. Tupy (2018): The Simon Abundance Index. A New Way to Measure Availability of Resources, Cato Institute Policy Analysis Nr. 857, am 23. Januar 2020 im Internet unter: <https://www.cato.org/sites/cato.org/files/pubs/pdfs/pa-857-update.pdf>



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Nominal and Real Resource Prices

Pooley and Tupy examined a basket of 50 commodities, distinguishing between nominal and real resource prices. They also distinguished between precious metals, energy, raw materials, metals and food.

- The nominal price trend is derived from data by the World Bank and the IMF for the period 1980 to the present.
- By 2017, nominal prices of 9 products fell, while they rose for the remaining 41 products.
- The average price of the shopping cart increased by 62.7%.
- However, in order to examine long-term periods, it is necessary to look at real (= inflation-adjusted) prices.
- By 2017, the price level had risen by 156%.
- Adjusted for inflation, the real price of 43 goods fell, two remained roughly in value, and only 5 products rose in price.
- The average real price fell by 36.3%.



The “Time Price” of Resources

Pooley and Tupy calculate time prices for goods by dividing the change in the real price of a good by a person's real hourly wage.

- If the real price of a good rises more slowly than the real wage, then the commodity becomes cheaper relative to income.
- As humanity has tended to become more productive in recent centuries, this reduces the hours of work needed to acquire a good.
- The time price indicates how much time an individual has to spend in order to acquire a specific good.
- The real price of the examined basket, adjusted for inflation, fell by 36.3% between 1980 and 2017. At the same time, real global wages rose by 80.1%, so that the real time price of the basket fell even stronger by 64.7%.

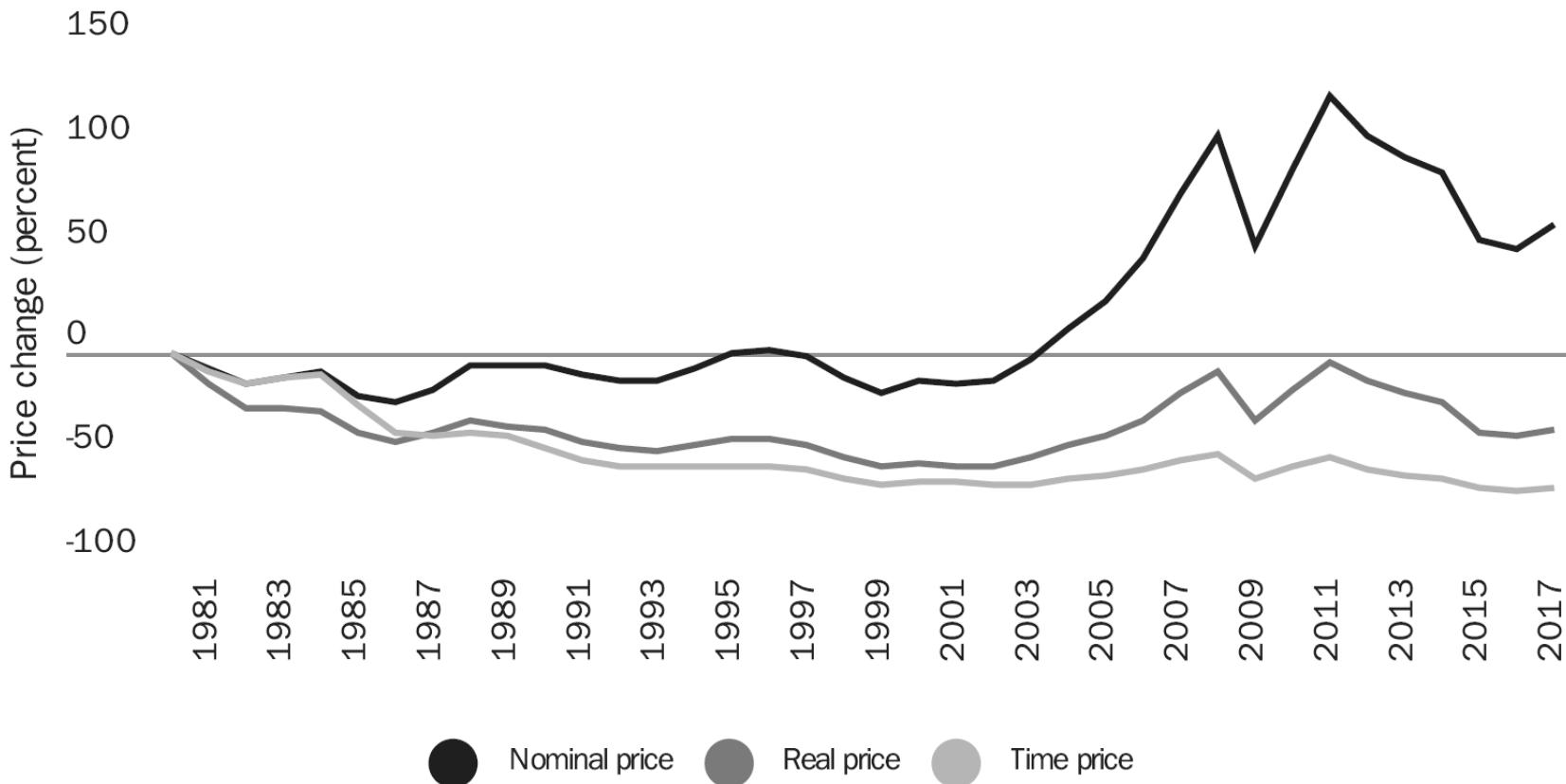


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Percentage Change in the Nominal, Real and Time Prices of Goods between 1980 and 2017

While nominal prices rise over time, real prices and also the time prices of the shopping cart under investigation, which includes 50 commodities, are falling.



Quelle: Pooley, Gale L. and Marial L Tupy (2018): The Simon Abundance Index, Policy Analysis, December 4, 2018, S 9



The Simon Abundance Index (SAI)

The Simon Abundance Index measures the change in resource wealth over a period of time by determining the real purchasing power of human labor, which is increasingly productive over time.

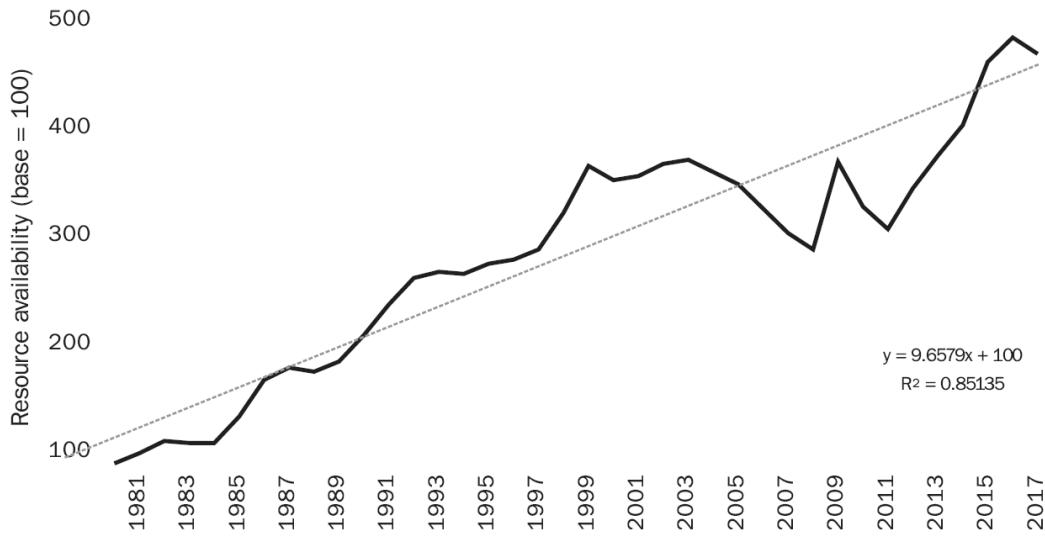


Bildquelle: https://d1qq9lwf5ow8iz.cloudfront.net/live-images-1/ImageDetail_f7a5d0e8-3b27-48d4-9293-66af3845e6d5_Medium

- The SAI is calculated as a ratio of population change divided by the change in time prices times 100. The base year is 1980. The basic value is 100.
- Between 1980 and 2017, resource availability increased by an average of 4.32% per year. The Earth was thus 379.6% richer in 2017 than in 1980.
- In 2018, the SAI value was 479.6. This means that the Earth is about 4.8 times richer than at the time of the original bet between Ehrlich and Simon.



„Simon Abundance Index“ and Simon’s Rule



The “Simon Abundance Index” (SAI) measures the change in resource wealth over a period of time. It gives the ratio of the change in population divided by the change in the time price, multiplied by 100. The base year is 1980. The index starts at 100.

Quelle: Pooley, Gale L. and Marial L Tupy (2018): The Simon Abundance Index, Policy Analysis, December 4, 2018, S.13

Simon’s Rule:

„As population increases, the time-price of most commodities will get cheaper for most people, most of the time. Unfortunately, most people will assume the opposite.“



Summary of Findings by Pooley and Tupy (2018)

	1980	2017	Change (%)
Nominal price	1.000	1.627	62.7
GDP deflator	1.000	2.556	155.6
Real prices	1.000	0.637	-36.3
Real annual income	6,431	10,495	63.2
Annual hours worked	2,168	1,964	-9.4
Real hourly income	2.97	5.34	80.1
Time price	0.34	0.12	-64.7
Population	4.46	7.55	69.3
Time price multiplier			2.83
Price elasticity of population			-0.934
SAI	100.0	479.6	379.6

Quelle: Pooley, Gale L. and Marial L Tupy (2018): The Simon Abundance Index, Policy Analysis, December 4, 2018, S.17



Excerpt from the SAI by Pooley and Tupy (2018)

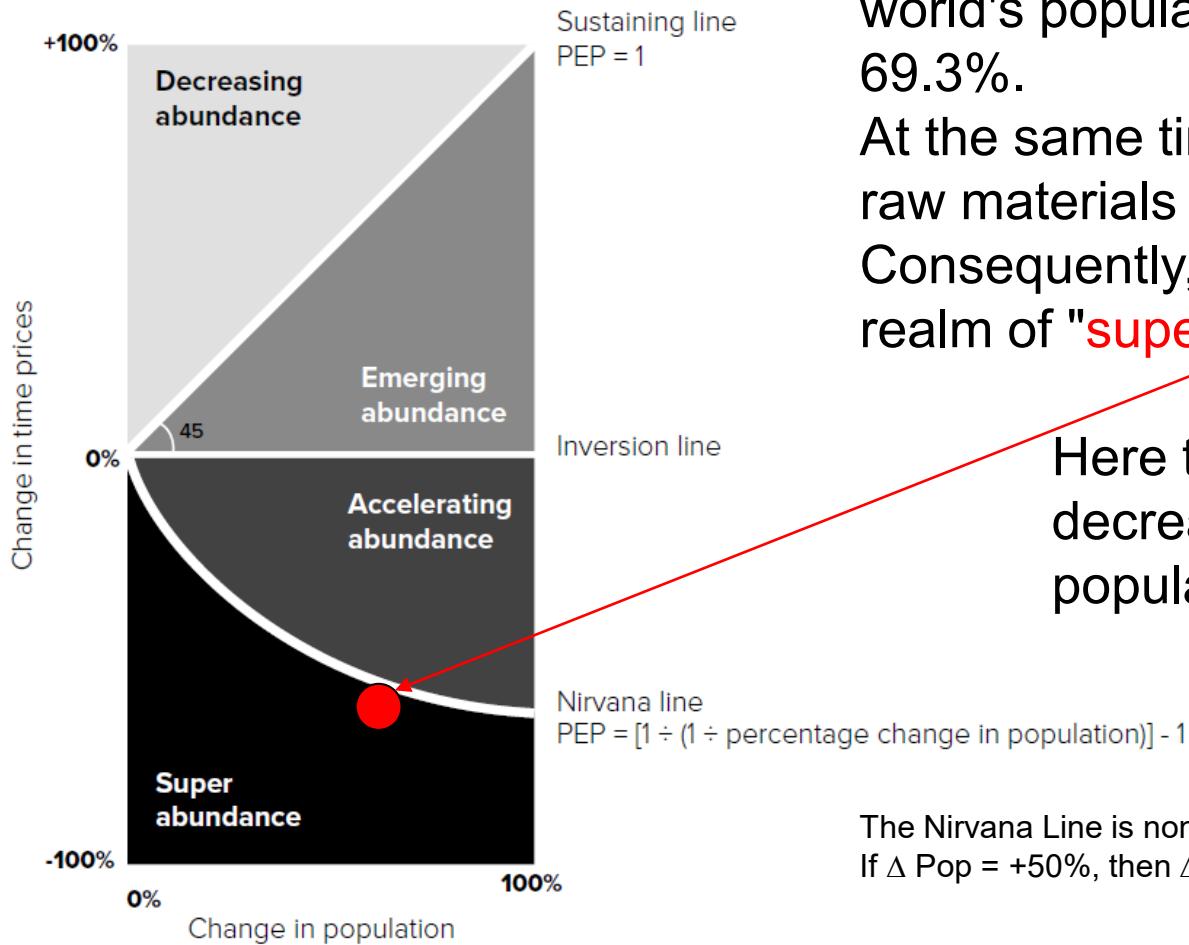
Commodity prices, 1980-2017 Adjusted for inflation and hourly income growth		Source: World Bank or IMF	Nominal price 1980	Nominal price 2017	Percentage change in nominal price
Aluminum	\$/mt	WB	1,774.91	1,967.65	10.9%
Bananas	\$/kg	WB	0.38	1.08	184.2%
Barley	\$/mt	WB	78.23	97.64	24.8%
Beef	\$/kg	WB	2.76	4.22	52.9%
Chicken	\$/kg	WB	0.76	2.12	178.9%

Real price in 2017 dollars 1980	Real price in 2017 dollars 2017	Change in real price	Time price at \$2.97 per hour 1980	Time price at \$5.34 per hour 2017	Percentage change time price	Time price multiplier 1980 = 1
4,536.06	1,967.65	-56.6%	1,529.18	368.22	-75.9%	4.15
0.97	1.08	11.3%	0.33	0.20	-38.2%	1.62
199.93	97.64	-51.2%	67.40	18.27	-72.9%	3.69
7.05	4.22	-40.1%	2.38	0.79	-66.8%	3.01
1.94	2.12	9.3%	0.65	0.40	-39.3%	1.65

Quelle: Pooley, Gale L. and Marial L Tupy (2018): The Simon Abundance Index, Policy Analysis, December 4, 2018, S.18 f.



Findings 2018: Global "Superabundance"



Between 1980 and 2017, the world's population increased by 69.3%. At the same time, the real price of raw materials fell by 64.7%. Consequently, the world was in the realm of "**superabundance**".

Here the time price decreases faster than the population is growing.

The Nirvana Line is nonlinear:
If $\Delta \text{Pop} = +50\%$, then $\Delta \text{Time Price} = -33\%$

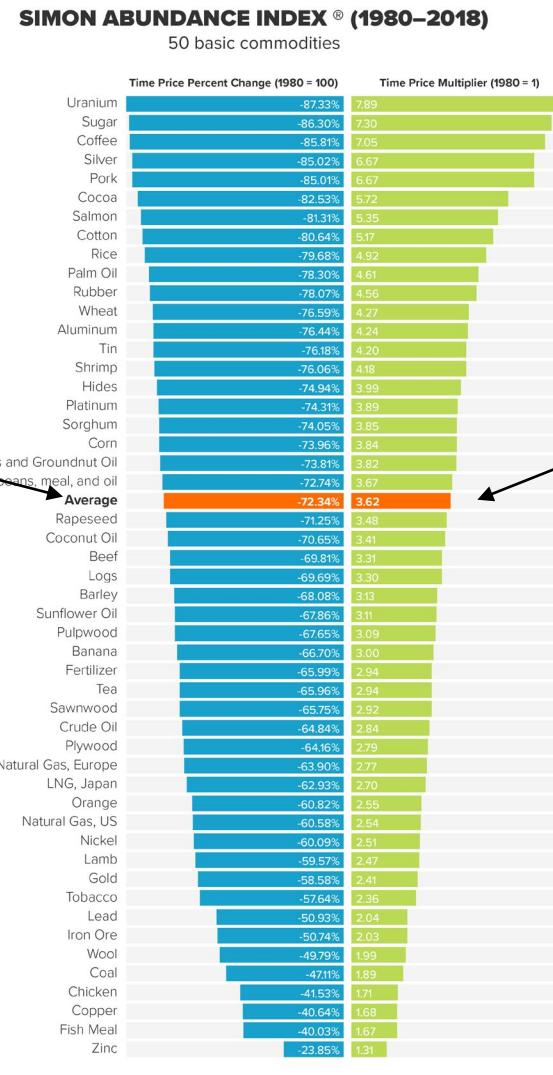


Update 2019

% change in the time price of raw materials from 1980 to 2018 (1980 = 100).

Average Value:
-72,34 %

Thus, the price of time – measured as a nominal commodity price divided by the nominal global hourly wage – has fallen sharply.



Time price multiplier (1980 = 1)

$$=1/(1-\Delta\% \text{ Time price})$$

Average Value:
3,62

The time it took in 1980 to acquire a unit of the commodity basket had a 3.62 times higher purchasing power in 2018.

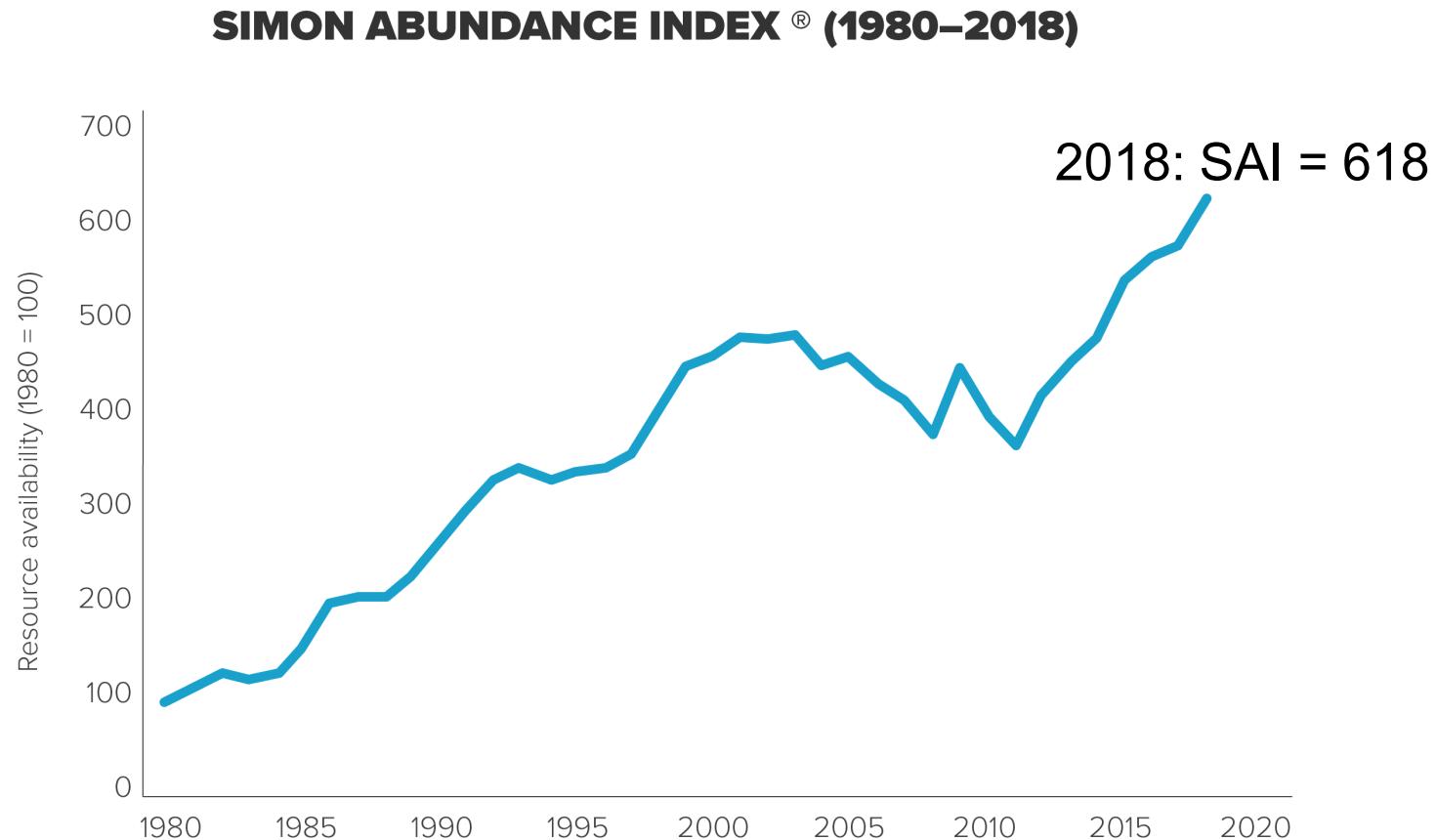
Quelle: <https://www.humanprogress.org/article.php?p=1916>



Update 2019: The SAI is 618

Interpretation:

Global resource availability increased by 518% between 1980 and 2018.



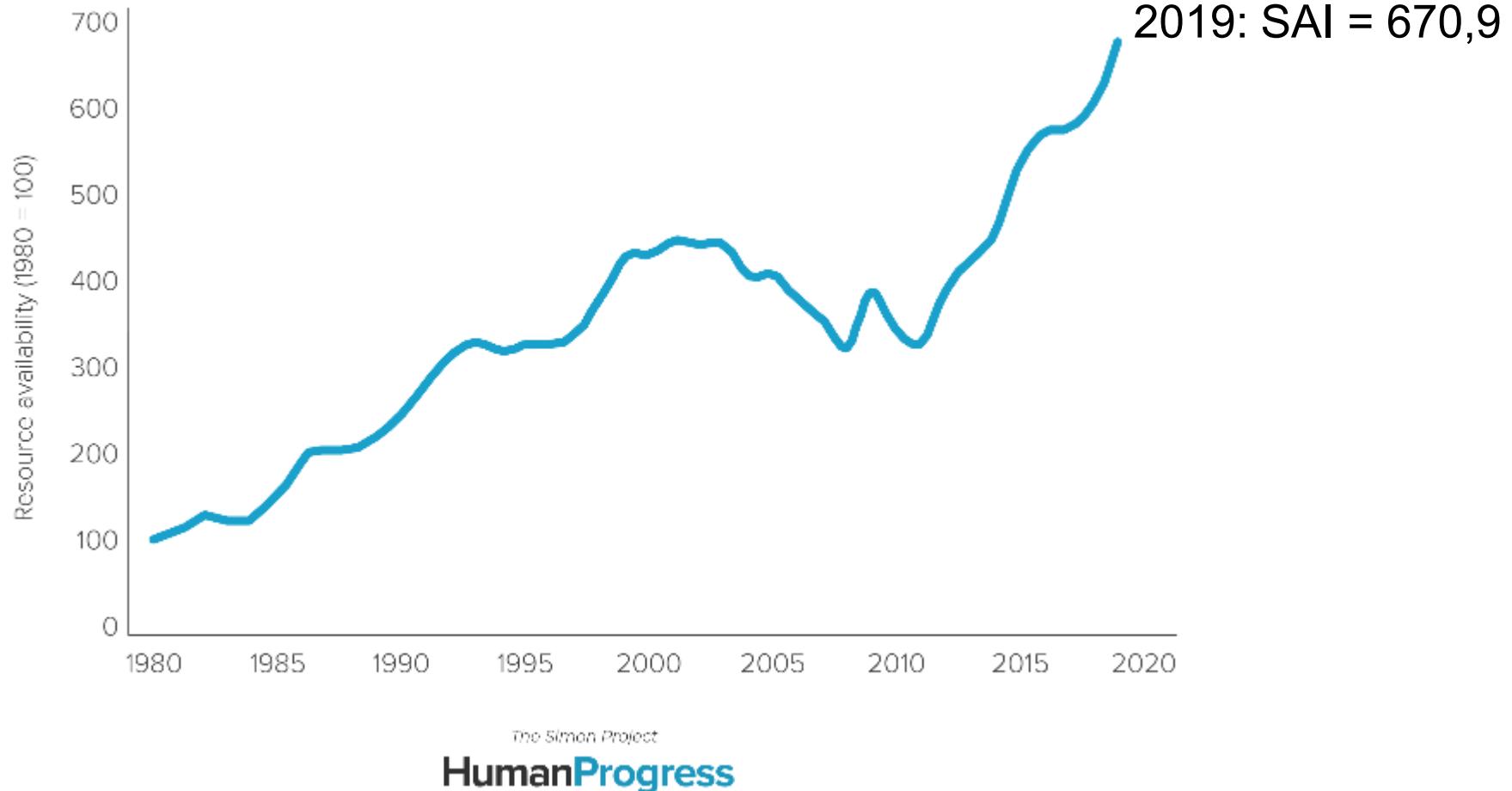
Quelle: <https://www.humanprogress.org/article.php?p=1916>



Update 2020: The SAI is 670.9

Interpretation:

Global resource availability increased by 571% between 1980 and 2019.



Update 2020 – Source: <https://www.humanprogress.org/simonproject/>

SUMMARY OF FINDINGS

	1980	2019	PERCENT CHANGE
Population, billions	4.458	7.677	73.2%
GDP Per Person Per Hour	\$3.24	\$16.49	409%
Time Price			-74.2%

SIMON ABUNDANCE INDEX® (SAI)

$$SAI = \frac{(1 + \text{percentage change in population})}{(1 + \text{percentage change in time-price})} \times 100$$

$$SAI = \frac{(1 + 73.2)}{(1 - 74.2)} \times 100$$

$$SAI = 670.90$$

PRICE ELASTICITY OF POPULATION (PEP)

$$PEP = \frac{\text{Percentage change in time-price}}{\text{Percentage change in population}}$$

$$PEP = \frac{-74.2}{73.2}$$

$$PEP = -1.014$$

CONCLUSION

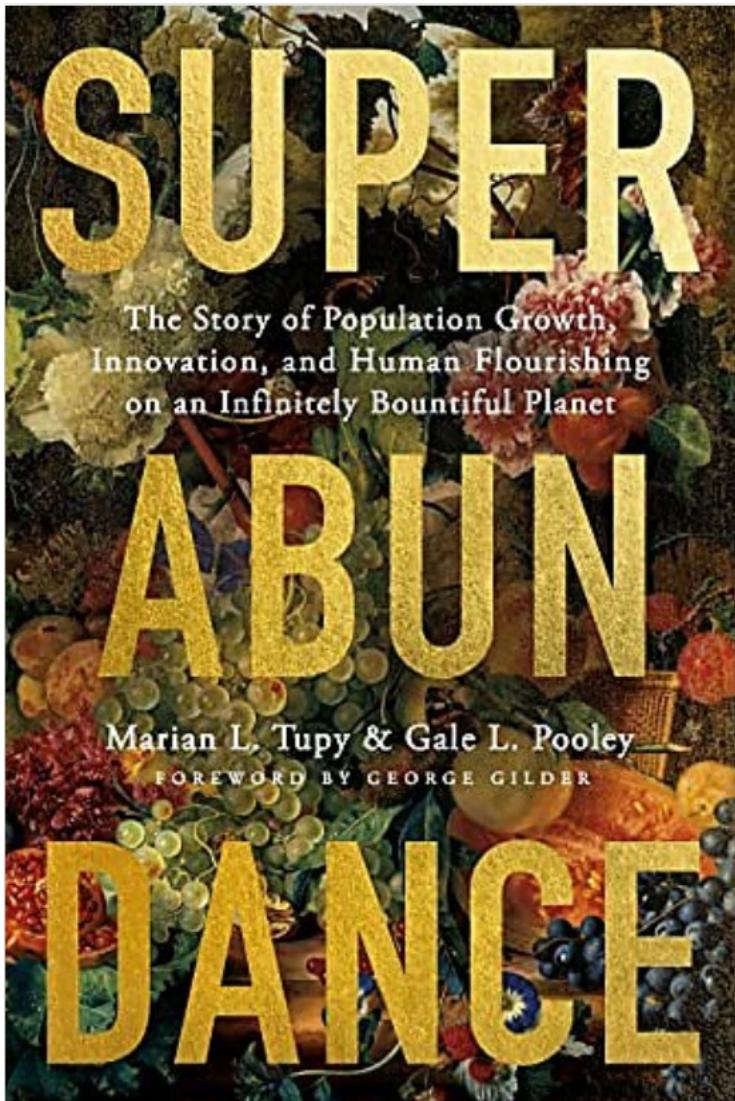
#1. Between 1980 and 2019, the average time price of our basket of 50 basic commodities fell by 74.2 percent.

#2. The Earth was 570.90 percent more abundant in 2018 than it was in 1980.

#3. Over the past 39 years, every additional human being born on our planet appears to have made resources proportionately more plentiful for the rest of us.



More Food for Thought



Superabundance

The Story of Population Growth, Innovation, and Human Flourishing on an Infinitely Bountiful Planet

This controversial and counterintuitive new book examines why population growth and freedom to innovate make Earth's resources more, not less, abundant.

AUGUST 2022 • PUBLISHED BY CATO INSTITUTE

By Marian L. Tupy and Gale L. Pooley

After analyzing the prices of hundreds of commodities, goods, and services spanning two centuries, Marian Tupy and Gale Pooley found that resources became more abundant as the population grew. That was especially true when they looked at "time prices," which represent the length of time that people must work to buy something.

To their surprise, the authors also found that resource abundance increased faster than the population—a relationship that they call "superabundance." On average, every additional human being created more value than he or she consumed. This relationship between population growth and abundance is deeply counterintuitive, yet it is true.

Why? More people produce more ideas, which lead to more inventions. People then test those inventions in the marketplace to separate the useful from the useless. At the end of that process of discovery, people are left with innovations that overcome shortages, spur economic growth, and raise standards of living.



Structure of Today's Lecture

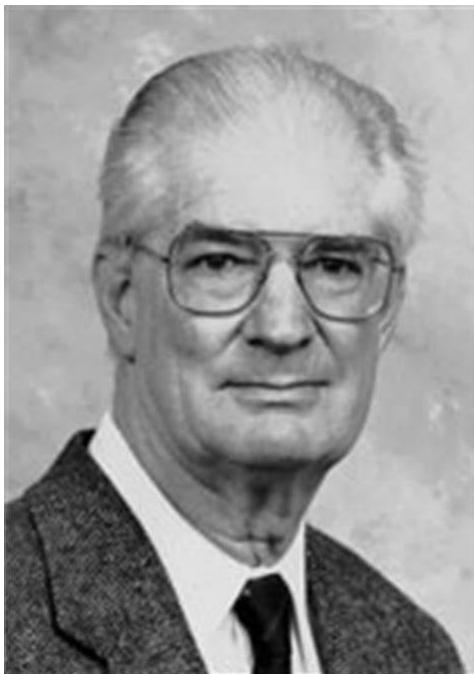
1. Tradeoff thinking as a problem
2. What triggers tradeoff thinking in the environmental field?
3. Reaction analysis: Deconstruction of the perpetrator-victim scheme
4. Interaction Analysis: The consumers' dilemma
5. Growth analysis: Environmental protection through innovation
6. Sustainability Semantics
7. Material for David Deutsch (2011), Chapters 9 and 17



On the Debate about Sustainability (I)

Herman Daly is a prominent growth critic.

Herman Daly



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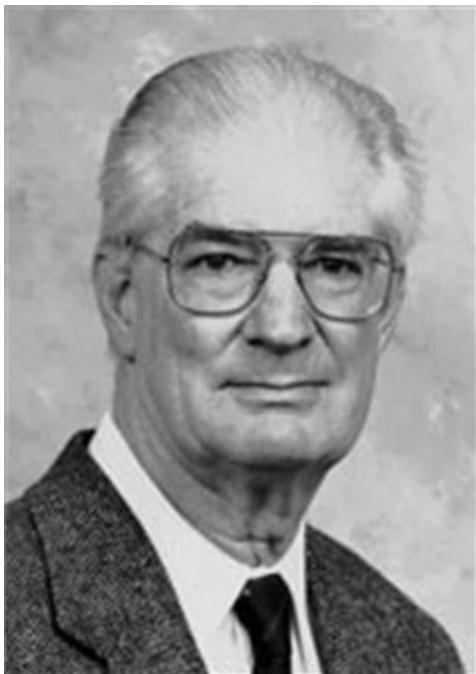
„Because of the exponential economic growth since World War II, we now live in a full world, but we still behave as if it were empty, with ample space and resources for the indefinite future. The founding assumptions of neoclassical economics, developed in the empty world, no longer hold, as the aggregate burden of the human species is reaching—or, in some cases, exceeding—the limits of nature at the local, regional, and planetary levels. The prevailing obsession with economic growth puts us on the path to ecological collapse, sacrificing the very sustenance of our well-being and survival. To reverse this ominous trajectory, we must transition toward a steady state economy focused on qualitative development, as opposed to quantitative growth, and the interdependence of the human economy and global ecosphere. Developing policies and institutions for a steady-state economy will require us to revisit the question of the purpose and ends of the economy.“ Daly (2015; p. 0)



On the Debate about Sustainability (II)

Herman Daly is a prominent growth critic.

Herman Daly



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„The Ultimate End, whatever it may be, cannot be growth. A better starting point for reasoning together is John Ruskin's aphorism that “there is no wealth but life.” How might that insight be restated as an economic policy goal? I would suggest the following: maximizing the cumulative number of lives ever to be lived over time at a level of per capita wealth sufficient for a good life. This leaves open the traditional ethical question of what is a good life, while conditioning its answer to the realities of ecology and the economics of sufficiency. At a minimum, it seems a more reasonable approximation than the current impossible goal of »ever more things for ever more people forever«.“

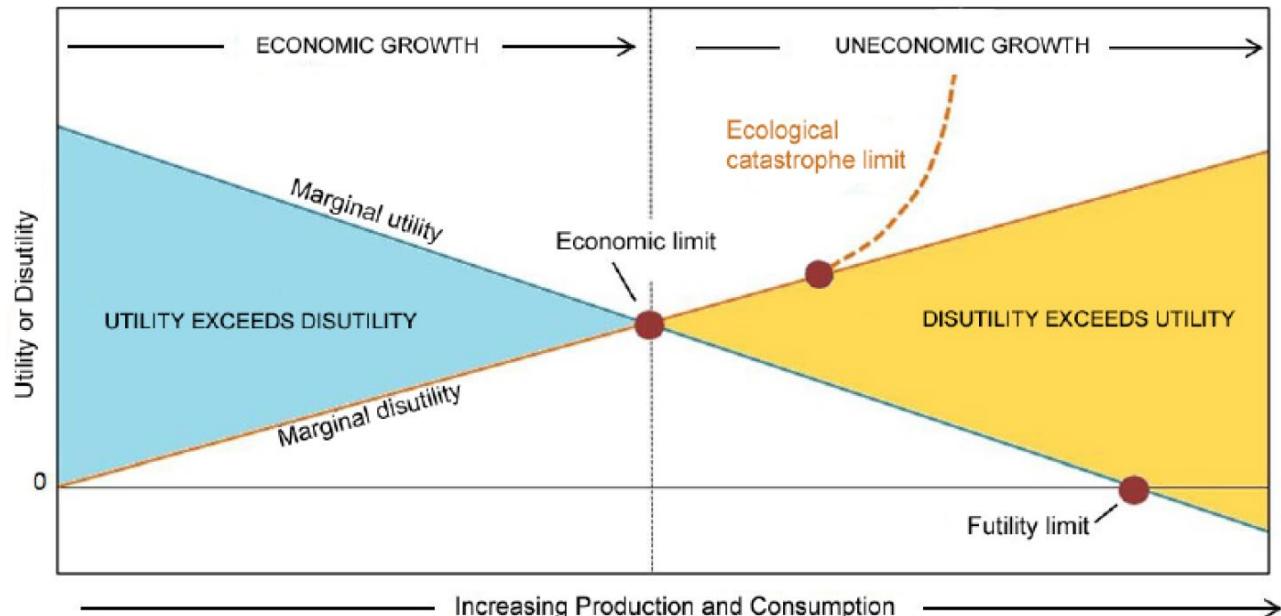
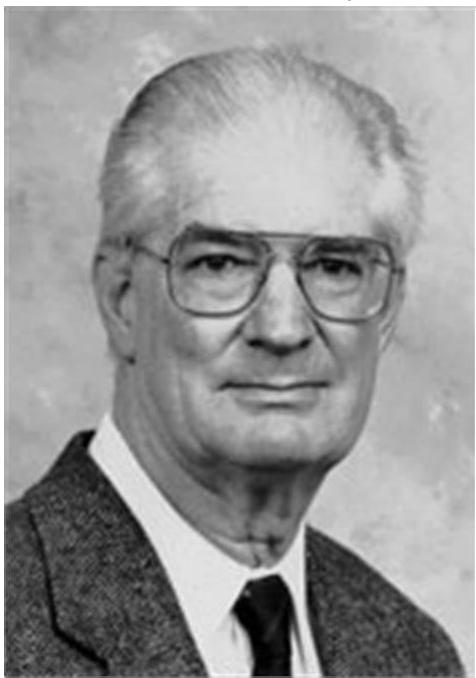
Daly (2015; p. 14)



On the Debate about Sustainability (III)

Herman Daly distinguishes three limits to growth.

Herman Daly



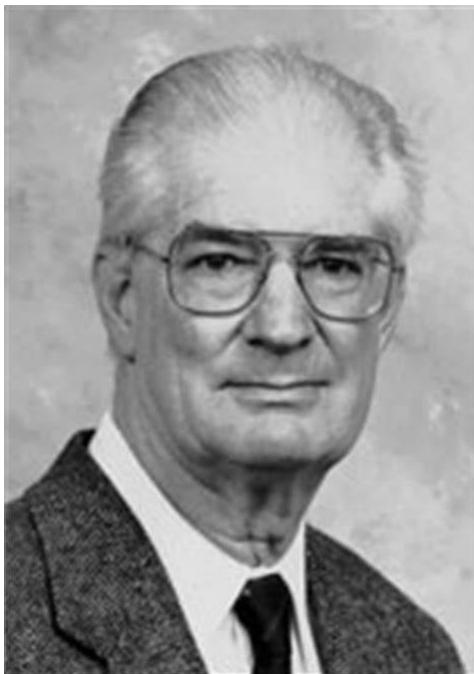
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On the Debate about Sustainability (IV)

Herman Daly recommends the following policies:

Herman Daly



- „(1) Developing Cap-Auction-Trade systems for basic resources (especially fossil fuels)**
- (2) Tax shifting**
- (3) Limiting inequality:** Establish minimum and maximum income limits, maintaining differences large enough to preserve incentives but small enough to suppress the plutocratic tendencies of market economies.
- (4) Reforming the banking sector**
- (5) Managing trade for the public good:** Move from free trade and free capital mobility to balanced and regulated international trade.“

Daly (2015; p. 11 f., emphasis in original)

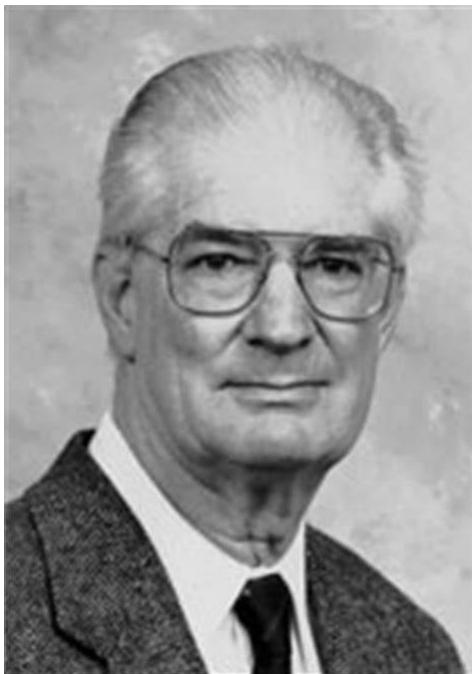
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On the Debate about Sustainability (V)

Herman Daly recommends the following policies:

Herman Daly



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„(6) Expanding leisure time: Reduce conventional work time in favor of part-time work, personal work, and leisure, thereby embracing well-being as a core metric of prosperity while reducing the drive for limitless production.

(7) Stabilizing population

(8) Reforming national accounts: Separate GDP into a cost account and a benefits account so that throughput growth can be stopped when marginal costs equal marginal benefits.

(9) Restoring full employment: ... Un/under-employment is the price we pay for growth from automation, off-shoring, deregulated trade, and a cheap-labor immigration policy. Under steady-state conditions, productivity improvements would lead to expanded leisure time rather than unemployment.

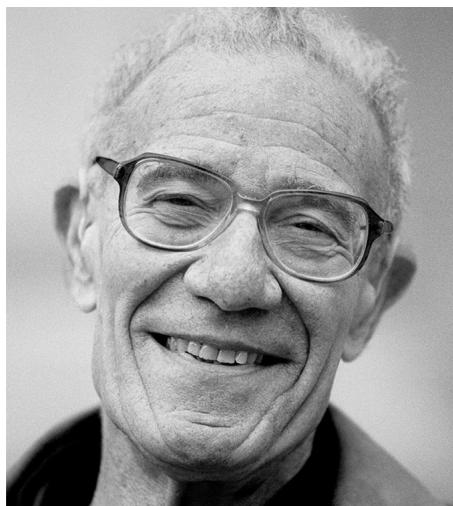
(10) Advancing just global governance: Seek world community as a federation of national communities, not the dissolution of nations into a single “world without borders.” Globalization by free trade, free capital mobility, and free migration dissolves national community, leaving nothing to federate. Such globalization is individualism writ large—a post-national corporate feudalism in a global commons.“ Daly (2015; p. 12, emphasis in original)



Sustainability – an (Early) Economic Perspective (I)

The economist (and Nobel laureate) Robert M. Solow participated early in the debate on the concept of sustainability.

Robert M. Solow



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„The notion of sustainability or sustainable growth (although, as you will see, it has nothing necessarily to do with growth) has infiltrated discussions of long-run economic policy in the last few years. It is very hard to be against sustainability. In fact, the less you know about it, the better it sounds. That is true of lots of ideas. The questions that come to be connected with sustainable development or sustainable growth or just sustainability are genuine and deeply felt and very complex. The combination of deep feeling and complexity breeds buzzwords, and sustainability has certainly become a buzzword.“

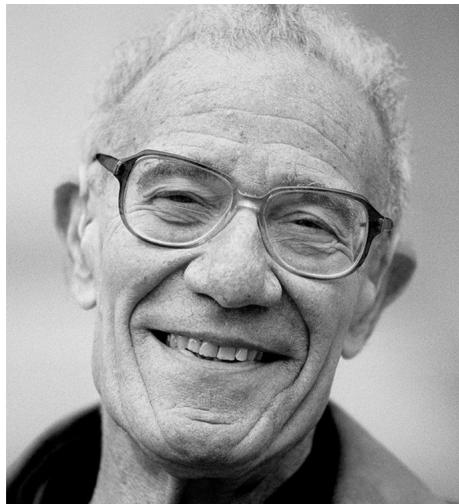
Solow (1992; p. 179)



Sustainability – an (Early) Economic Perspective (II)

Solow emphasizes an ethical principle: Ultra posse nemo obligatur – Ought implies Can.

Robert M. Solow



„Pretty clearly the notion of sustainability is about our obligation to the future. It says something about a moral obligation that we are supposed to have for future generations. I think it is very important to keep in mind – I'm talking like a philosopher for the next few sentences and I don't really know how to do that – that you can't be morally obligated to do something that is not feasible.“

Solow (1992; p. 180)

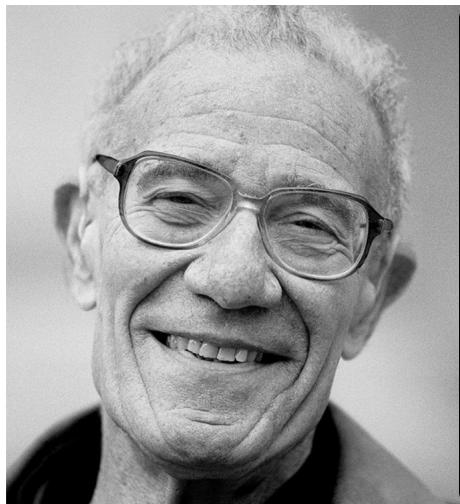
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Sustainability – an (Early) Economic Perspective (III)

Solow points out that a meaningful idea of sustainability cannot imply calling for the world to stand still.

Robert M. Solow



„If you define sustainability as an obligation to leave the world as we found it in detail, I think that's glib but essentially unfeasible. It is, when you think about it, not even desirable.“
Solow (1992; p. 180)

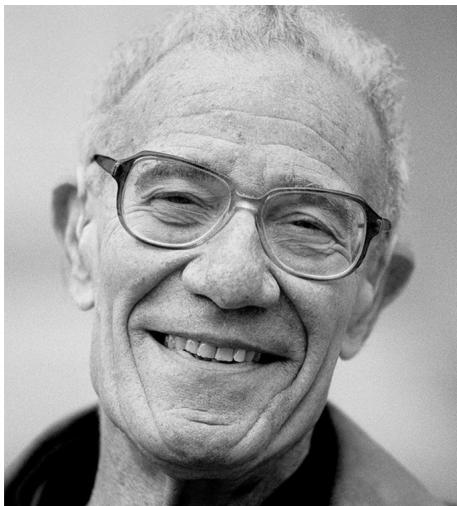
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Sustainability – an (Early) Economic Perspective (IV)

Solow favors a different definition:

Robert M. Solow



„To make something reasonable and useful out of the idea of sustainability, I think you have to try a different kind of definition. The best thing I could think of is to say that it is an obligation to conduct ourselves so that we leave to the future the option or the capacity to be as well off as we are. It is not clear to me that one can be more precise than that. Sustainability is an injunction not to satisfy ourselves by impoverishing our successors.“
Solow (1992; p. 180 f.)

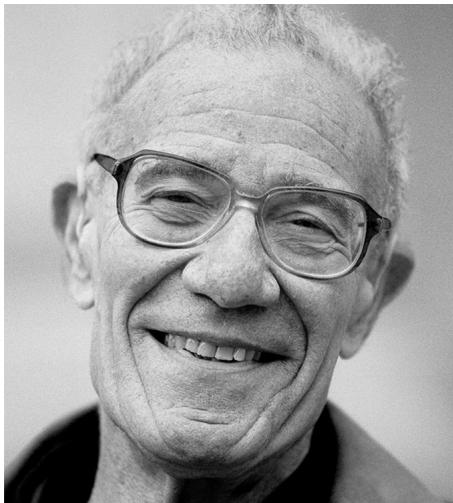
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Sustainability – an (Early) Economic Perspective (V)

Solow emphasizes the substitutability of resources:

Robert M. Solow



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„[W]e have to recognize that different amenities really are, to some extent, substitutable for one another, and we should be as inclusive as possible in our calculations. It is perfectly okay, it is perfectly logical and rational, to argue for the preservation of a particular species or the preservation of a particular landscape. But that has to be done on its own, for its own sake, because this landscape is intrinsically what we want or this species is intrinsically important to preserve, not under the heading of sustainability. Sustainability doesn't require that any *particular* species of owl or any *particular* species of fish or any *particular* tract of forest be preserved.“

Solow (1992; p. 181, emphasis in original)

„In making policy decisions we can take advantage of the principle of substitutability, remembering that what we are obligated to leave behind is a generalized capacity to create well-being, not any particular thing or any particular natural resource.“

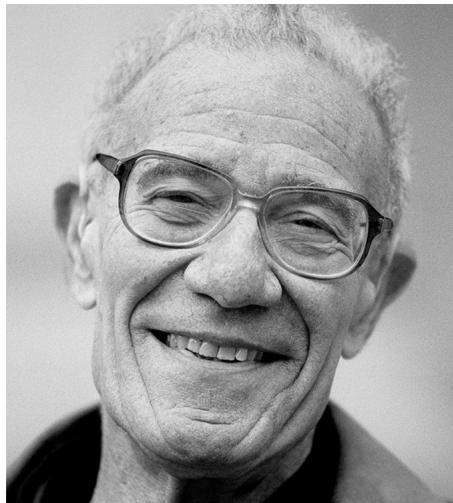
Solow (1992; p. 182)



Sustainability – an (Early) Economic Perspective (VI)

Solow emphasizes the role of uncertainty due to missing knowledge:

Robert M. Solow



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„If you approach the problem that way in trying to make plans and make policies, it is certain that there will be mistakes. We will impute to the future tastes that they don't have or we will impute to them technological capacities that they won't have or we will fail to impute to them tastes and technological capacities that they do have. The set of possible mistakes is usually pretty symmetric.

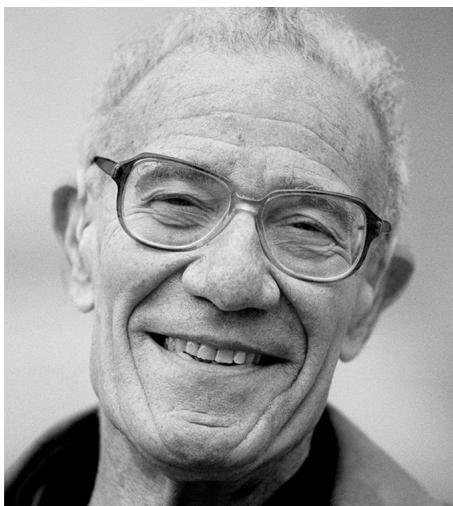
That suggests to me the importance of choosing robust policies whenever we can. We should choose policies that will be appropriate over as wide a range of possible circumstances as we can imagine. But it would be wrong for policy to be paralyzed by the notion that one can make mistakes. Liability to error is the law of life. And ... you choose policies to avoid potentially catastrophic errors, if you can. You insure wherever you can, but that's it.“
Solow (1992; p. 182)



Sustainability – an (Early) Economic Perspective (VII)

Solow emphasizes the tradeoffs within the present as well as between the present and the future. Both are part of sustainability! – And both have to do with social dilemmas (2-PD)!

Robert M. Solow



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„The way I have put this, and I meant to do so, emphasizes that sustainability is about distributional equity. It is about who gets what. It is about the sharing of well-being between present people and future people. I have also emphasized the need to keep in mind, in making plans, that we don't know what they will do, what they will like, what they will want. And, to be honest, it is none of our business.“
Solow (1992; p. 182)

„Sustainability is a problem precisely because each of us knows or realizes that we can profit at the expense of the future rather than at the expense of our contemporaries and the environment. We free-ride on each other and we free-ride on the future.“
Solow (1992; p. 183)

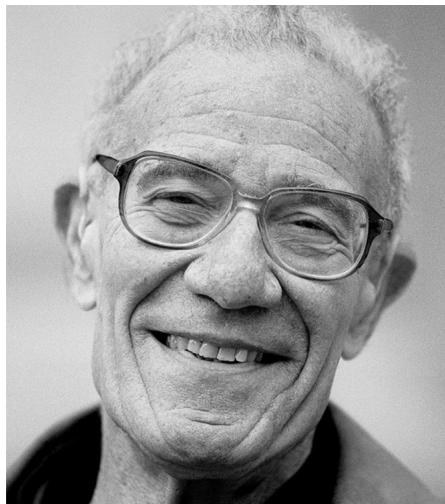
„There is something inconsistent about people who profess to be terribly concerned about the welfare of future generations but do not seem to be terribly concerned about the welfare of poor people today.“
Solow (1992; p. 185)



Sustainability – an (Early) Economic Perspective (VIII)

Solow draws an important conclusion:

Robert M. Solow



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„A correct principle, a correct general guide is that when we use up something—and by we I mean our society, our country, our civilization, however broadly you want to think — when we use up something that is irreplaceable, whether it is minerals or a fish species, or an environmental amenity, then we should be thinking about providing a substitute of equal value, and the vagueness comes in the notion of value. The something that we provide in exchange could be knowledge, could be technology. It needn't even be a physical object.“

Solow (1992; p. 184)

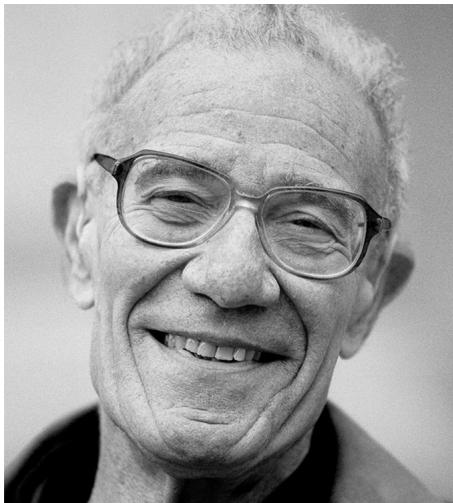
Solow explains this by pointing out how different Norway and the UK are in terms of handling their oil production revenues: investment versus consumption.



Sustainability – an (Early) Economic Perspective (IX)

Solow draws the following conclusion:

Robert M. Solow



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„Sustainability as a moral obligation is a general obligation, not a specific one. It is not an obligation to preserve this or preserve that. It is an obligation, if you want to make sense out of it, to preserve the capacity to be well off, to be as well off as we. ... Secondly, an interest in sustainability speaks for investment generally. I mentioned that directing the rents on non-renewable resources into investment is a good rule of thumb, a reasonable and dependable starting point. But what sustainability speaks for is investment, investment of any kind. ... Third, there is something faintly phony about deep concern for the future combined with callousness about the state of the world today. The catch is that today's poor want consumption not investment. So the conflict is pretty deep and there is unlikely to be any easy way to resolve it. Fourth, research is a good thing. Knowledge on the whole is an environmentally neutral asset that we can contribute to the future.“

Solow (1992; p. 186 f.)



Ordonomic Theses on Sustainability

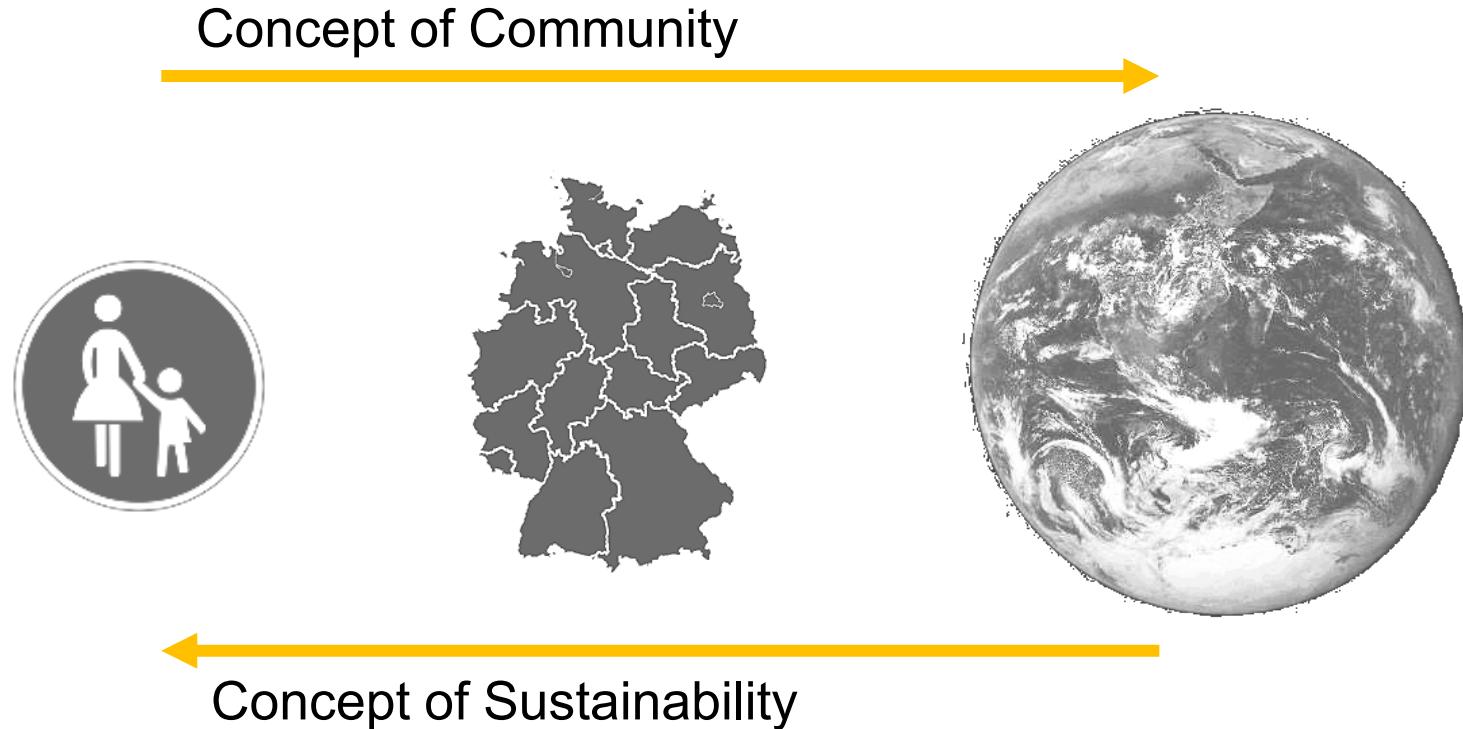
Most terms for normative (self-) understanding have a long history. In sharp contrast, the concept of sustainability is a semantic innovation – of world-historical significance: as the semantics of the growth society!

Fairness?
Equality?
Justice?
Freedom?
Prosperity?
Solidarity?



Thesis 1: Sustainability as a cosmopolitan concept *sui generis*

Community concepts operate with a gradual expansion of group size. Sustainability turns this perspective around and starts globally. This is new.

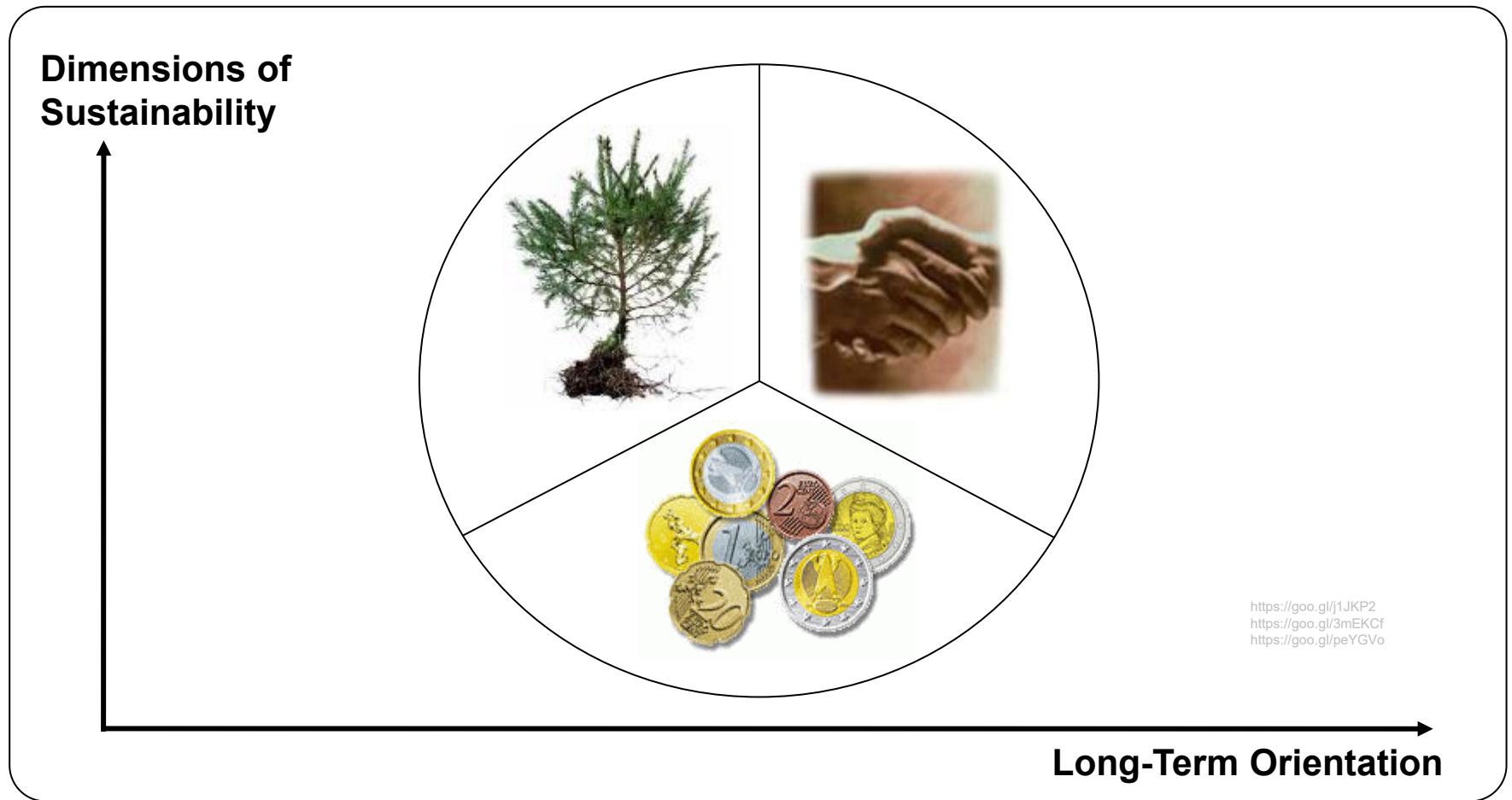


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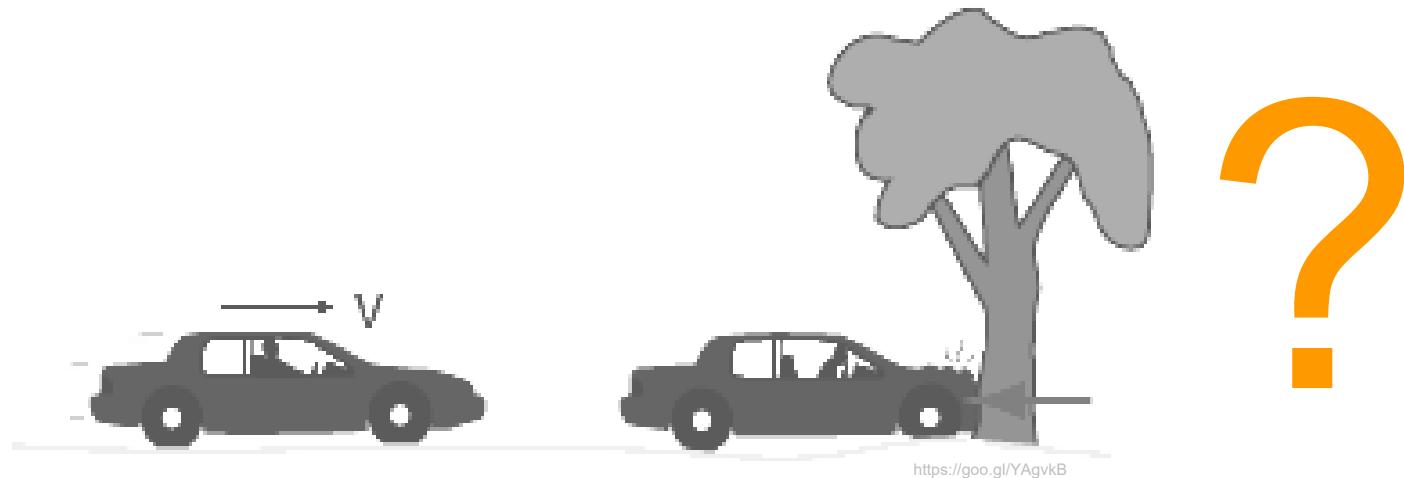
Thesis 2: Cross-Departmental Thinking

Sustainability combines the social, environmental and economic dimension with a long-term orientation. Public finances are now also regarded as a question of sustainability.



Thesis 3: Sustainability is an Internal Process Criterion

Sustainability asks: Is a process going against the wall in the foreseeable future?

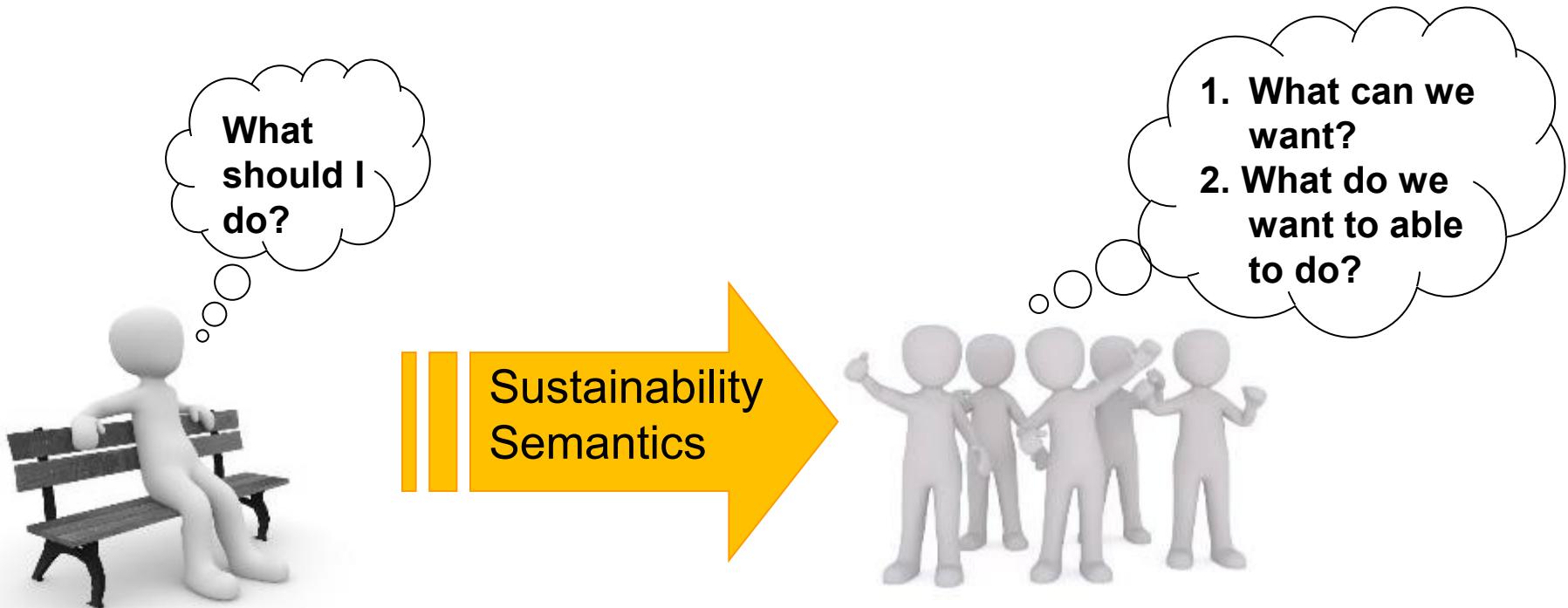


Sustainability addresses the self-continuation potential of societal processes.



Thesis 4: Sustainability as a Heuristic for Common Rule-Setting

With the help of sustainability semantics, two constructive questions can be asked:

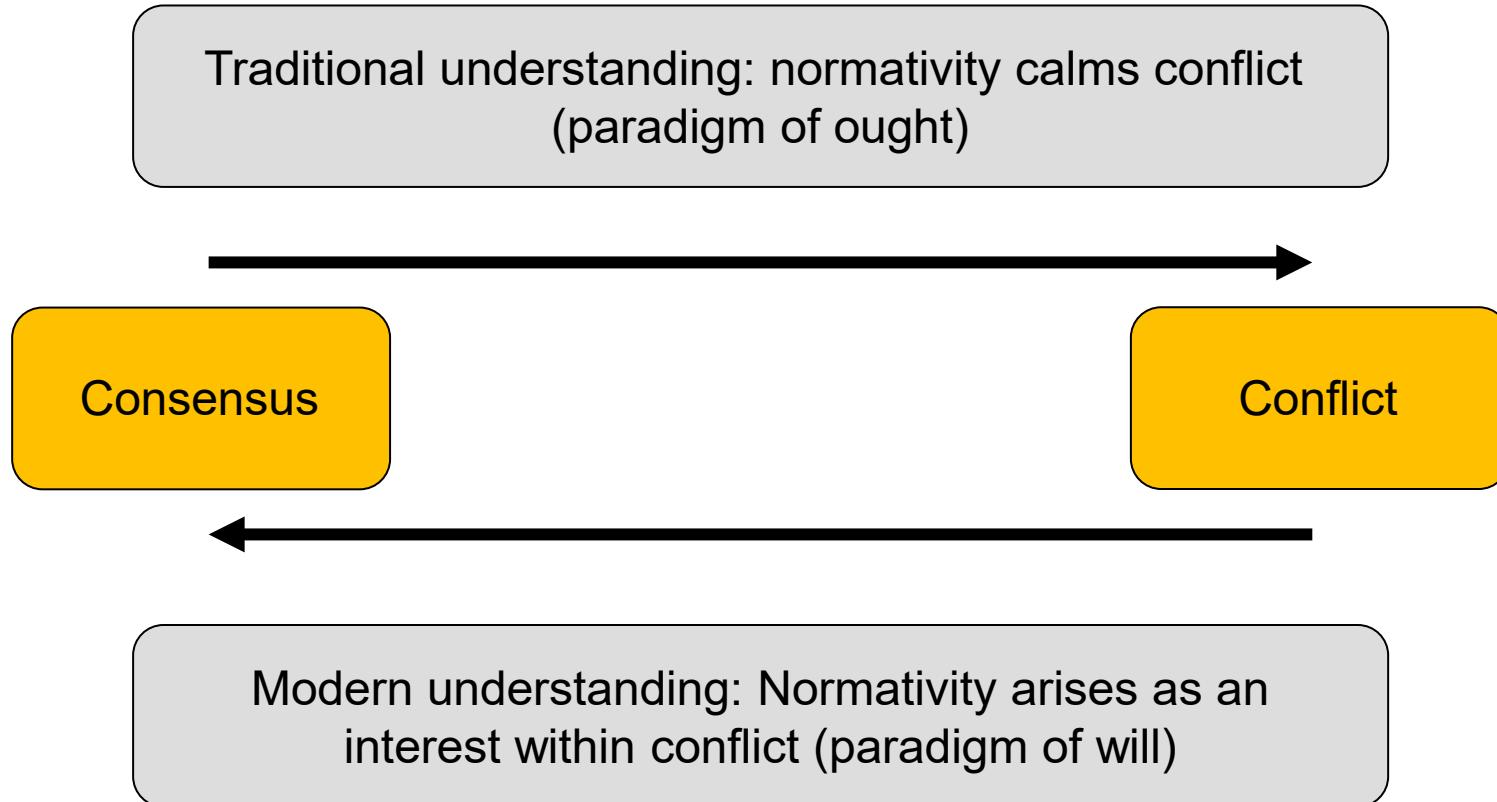


The (world) society needs common ground:
Rule consensus instead of value consensus!



Thesis 5: Sustainability is a very special Consensus Heuristic

*Consensus is not externally fed into the conflict, but developed internally from the conflict.
Clashes of interests due to dilemmatic incentives are the source of win-win solutions!*



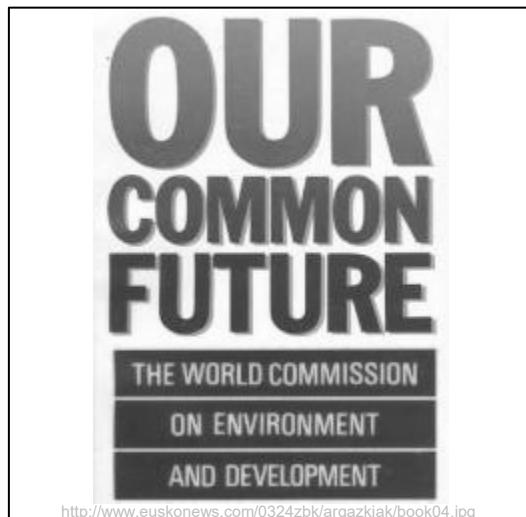
Thesis 6: Sustainability semantics evolves from Econ to BusAdmin

The concept of sustainability originates from forestry. The development of sustainability semantics in modern society can be presented in three stages. (ESG = ecological, social and governance dimensions).

Brundtland Definition

Triple-Bottom-Line

ESG Criteria



Sustainability semantics promotes the consensus orientation of societal development and economic value creation.



Thesis 7: Sustainability Semantics as Win-Win Heuristics

Win-win solutions are good for business. The orientation towards the concept of sustainability helps to systematically identify and exploit potentials for mutual improvements.



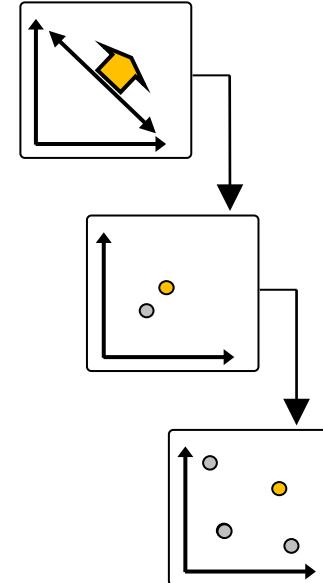
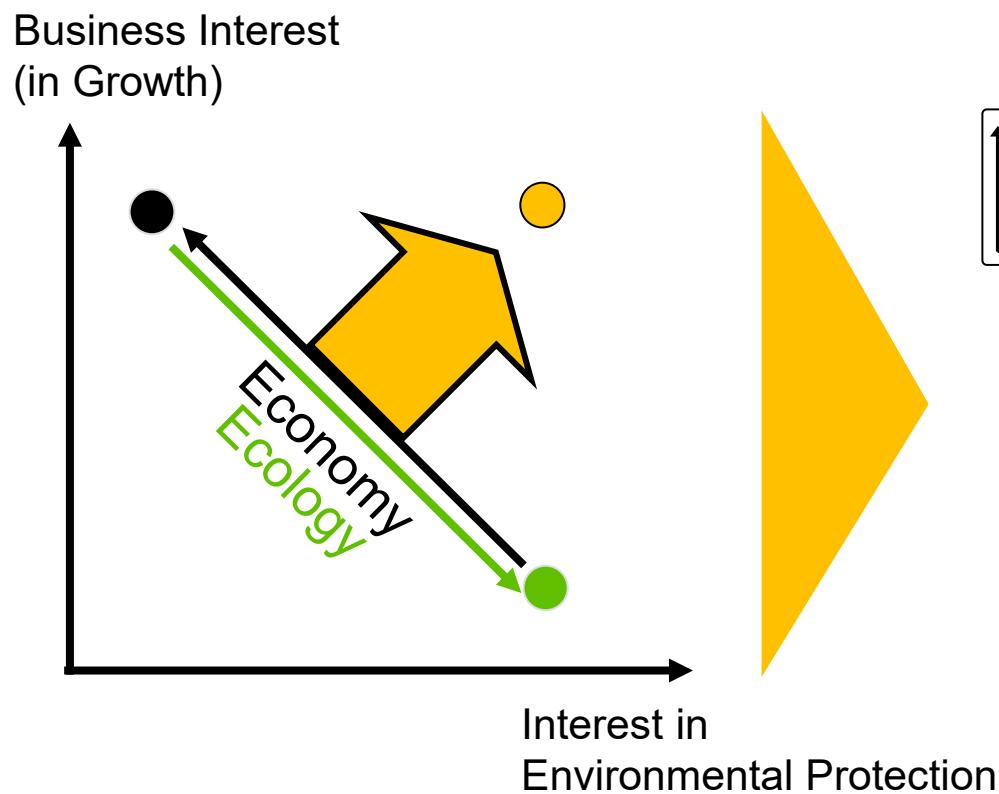
<http://sagestone.files.wordpress.com/2011/03/win-win.gif>

Finding (and even inventing) sustainable win-win solutions is a challenge for strategic management.



Closing Thesis

Sustainability semantics can make an important contribution to the (worldwide) societal (self-enlightenment in public discourses of meta-metagames and thus significantly promote the (worldwide) societal (self-)governance in political processes of metagames: as an intellectual guide for successful growth management, which overcomes undesirable social dilemmas in basic games. This applies to the businesses as well as to the (global) economy as a whole..



Eigene Darstellung



Structure of Today's Lecture

1. Tradeoff thinking as a problem
 2. What triggers tradeoff thinking in the environmental field?
 3. Reaction analysis: Deconstruction of the perpetrator-victim scheme
 4. Interaction Analysis: The consumers' dilemma
 5. Growth analysis: Environmental protection through innovation
 6. Sustainability Semantics
7. Material for David Deutsch (2011), Chapters 9 and 17



David Deutsch: Optimism (I)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He argues that the future is open in principle.

David Deutsch



<https://www.thersa.org/globalassets/speakers/david-deutsch.jpg>

David Deutsch stresses the role of knowledge generation and innovation.

„Just as no one in 1900 could have foreseen the consequences of innovations made during the twentieth century – including whole new fields such as nuclear physics, computer science and biotechnology – so our own future will be shaped by knowledge that we do not yet have. We cannot even predict most of the problems that we shall encounter, or most of the opportunities to solve them, let alone the solutions and attempted solutions and how they will affect events. People in 1900 did not consider the internet or nuclear power *unlikely*: they did not conceive of them at all.“ (p. 197 f., emphasis in original)

Following Karl Popper, David Deutsch emphasizes the open future of an open society.



David Deutsch: Optimism (II)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He opposes the naive forms of optimism.

David Deutsch



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„*Blind* optimism is a stance towards the future. It consists of proceeding as if one knows that the bad outcomes will not happen. The opposite approach, blind pessimism, often called the *precautionary principle*, seeks to ward off disaster by avoiding everything not known to be safe. No one seriously advocates either of these two as a universal policy, but their assumptions and their arguments are common, and often creep into people's planning.“
(p. 201, emphasis in original)



David Deutsch: Optimism (III)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He uses the example of the *Titanic* in order to explain blind optimism.

David Deutsch



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„Blind optimism is also known as ‘overconfidence’ or ‘recklessness’. An often cited example, perhaps unfairly, is the judgement of the builders of the ocean liner *Titanic* that it was ‘practically unsinkable’. The largest ship of its day, it sank on its maiden voyage in 1912. Designed to survive every foreseeable disaster, it collided with an iceberg in a manner that had not been foreseen. A blind pessimist argues that there is an inherent asymmetry between good and bad consequences: a successful maiden voyage cannot possibly do as much good as a disastrous one can do harm. ... [A] single catastrophic consequence of an otherwise beneficial innovation could put an end to human progress for ever. So the blindly pessimistic approach to building ocean liners is to stick with existing designs and refrain from attempting any records.“ (S. 201, emphasis in original)



David Deutsch: Optimism (IV)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He points to the similarity of naive forms of optimism and pessimism – and criticizes the precautionary principle.

David Deutsch



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„But blind pessimism is a blindly optimistic doctrine. It assumes that unforeseen disastrous consequences cannot follow from existing knowledge too (or, rather, from existing ignorance). Not all shipwrecks happen to record-breaking ships. Not all unforeseen physical disasters need be caused by physics experiments or new technology. But one thing we do know is that protecting ourselves from *any* disaster, foreseeable or not, or recovering from it once it has happened, requires knowledge; and knowledge has to be created. The harm that can flow from any innovation that does not destroy the growth of knowledge is always finite; the good can be unlimited. There would be no existing ship designs to stick with, nor records to stay within, if no one had ever violated the precautionary principle.“
(p. 201 f., emphasis in original)



David Deutsch: Optimism (V)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He criticizes the precautionary principle as follows:

David Deutsch



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„As we look back on the failed civilizations of the past, we can see that they were so poor, their technology was so feeble, and their explanations of the world so fragmentary and full of misconceptions that their caution about innovation and progress was as perverse as expecting a blindfold to be useful when navigating dangerous waters. Pessimists believe that the present state of our own civilization is an exception to that pattern. But what does the precautionary principle say about *that* claim? Can we be sure that our present knowledge, too, is not riddled with dangerous gaps and misconceptions? That our present wealth is not pathetically inadequate to deal with unforeseen problems? Since we cannot be sure, would not the precautionary principle require us to confine ourselves to the policy that would always have been salutary in the past – namely innovation and, in emergencies, even blind optimism about the benefits of new knowledge?“ (p. 204, emphasis in original)



David Deutsch: Optimism (VI)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He considers the precautionary principle to be untenable:

David Deutsch



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„[I]n the case of our civilization, the precautionary principle rules itself out. Since our civilization has not been following it, a transition to it would entail reigning in the rapid technological progress that is under way. And such a change has never been successful before. So a blind pessimist would have to oppose it on principle.“ (p. 204)



David Deutsch: Optimism (VII)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He considers the precautionary principle to be paradoxical:

David Deutsch



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„There is a closed loop of ideas here: on the assumption that knowledge is not going to grow, the precautionary principle is true; and on the assumption that the precautionary principle is true, we cannot afford to allow knowledge to grow. Unless a society is expecting its own future choices to be better than its present ones, it will strive to make its present policies and institutions as immutable as possible. Therefore Popper's criterion can be met only by societies that expect their knowledge to grow – and to grow unpredictably. And, further, they are expecting that if it did grow, *that would help.*“
(p. 212, emphasis in original)



David Deutsch: Optimism (VIII)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He writes about governance:

David Deutsch



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„Our political institutions, ways of life, personal aspirations and morality are all forms or embodiments of knowledge, and all will have to be improved if civilization – and the Enlightenment in particular – is to survive every one of the risks that Rees describes and presumably many others of which we have no inkling.“ (p. 208)



David Deutsch: Optimism (IX)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He concludes:

David Deutsch



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„How can we formulate policies for the unknown? If we cannot derive them from our best existing knowledge, or from dogmatic rules of thumb like blind optimism or pessimism, where can we derive them from? Like scientific theories, policies cannot be derived from anything. They are conjectures. And we should choose between them not on the basis of their origin, but according to how good they are as explanations: how hard to vary.“
(p. 208 f., emphasis in original)



David Deutsch: Optimism (X)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He refers to Karl Popper:

David Deutsch



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„Popper ... applies his basic '*how can we detect and eliminate errors?*' to political philosophy in the form how can we rid ourselves of bad governments without violence? Just as science seeks explanations that are experimentally testable, so a rational political system makes it as easy as possible to detect, and persuade others, that a leader or policy is bad, and to remove them without violence if they are. Just as the institutions of science are structured so as to avoid entrenching theories, but instead to expose them to criticism and testing, so political institutions should not make it hard to oppose rulers and policies, non-violently, and should embody traditions of peaceful, critical discussion of them and of the institutions themselves and everything else. Thus, systems of government are to be judged not for their prophetic ability to choose and install good leaders and policies, but for their ability to remove bad ones that are already there.“
(p. 211, emphasis in original)



David Deutsch: Optimism (XI)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He establishes a link between fallibilism and knowledge optimism:

David Deutsch



„That entire stance is fallibilism in action. It *assumes* that rulers and policies are always going to be flawed – that problems are inevitable. But it also assumes that improving upon them is possible: problems are soluble. The ideal towards which this is working is not that nothing unexpected will go wrong, but that when it does it will be an opportunity for further progress.“
(p. 208 f., emphasis in original)

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David Deutsch: Optimism (XII)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He characterizes his optimism about knowledge as follows:

David Deutsch



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„Optimism is, in the first instance, a way of explaining failure, not prophesying success. It says that there is no fundamental barrier, no law of nature or supernatural decree, preventing progress. Whenever we try to improve things and fail, it is not because the spiteful (or unfathomably benevolent) gods are thwarting us or punishing us for trying, or because we have reached a limit on the capacity of reason to make improvements, or because it is best that we fail, but always because we did not know enough, in time. But optimism is also a stance towards the future, because nearly all failures, and nearly all successes, are yet to come.“ (p. 212)



David Deutsch: Optimism (XIII)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He argues, in reference to Karl Popper, with a duty of (knowledge) optimism:

David Deutsch



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„Optimism implies all the other necessary conditions for knowledge to grow, and for knowledge-creating civilizations to last, and hence for the beginning of infinity. We have, as Popper put it, a duty to be optimistic – in general, and about civilization in particular. One can argue that saving civilization will be difficult. That does not mean that there is a low probability of solving the associated problems. When we say that a mathematical problem is hard to solve, we do not mean that it is *unlikely* to be solved. All sorts of factors determine whether mathematicians even address a problem, and with what effort. If an easy problem is not deemed to be interesting or useful, they might leave it unsolved indefinitely, while hard problems are solved all the time.“ (p. 214 f.)



David Deutsch: Optimism (XIV)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He writes again about pessimism:

David Deutsch



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„Pessimism has been endemic in almost every society throughout history. It has taken the form of the precautionary principle, and of ‘who should rule?’ political philosophies and all sorts of other demands for prophecy, and of despair in the power of creativity, and of the misinterpretation of problems as insuperable barriers. Yet there have always been a few individuals who see obstacles as problems, and see problems as soluble. And so, very occasionally, there have been places and moments when there was, briefly, an end to pessimism. As far as I know, no historian has investigated the history of optimism, but my guess is that whenever it has emerged in a civilization there has been a mini-enlightenment: a tradition of criticism resulting in an efflorescence of many of the patterns of human progress with which we are familiar, such as art, literature, philosophy, science, technology and the institutions of an open society. The end of pessimism is potentially a beginning of infinity. Yet I also guess that in every case – with the single, tremendous exception (so far) of our own Enlightenment – this process was soon brought to an end and the reign of pessimism was restored.“ (p. 216)



David Deutsch: Optimism (XV)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He argues that the problems of humanity can be solved by knowledge.

David Deutsch



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„Optimism (in the sense that I have advocated) is the theory that all failures – all evils – are due to insufficient knowledge. This is the key to the rational philosophy of the unknowable. It would be contentless if there were fundamental limitations to the creation of knowledge, but there are not. It would be false if there were fields – especially philosophical fields such as morality – in which there were no such thing as objective progress. But truth does exist in all those fields, and progress towards it is made by seeking good explanations.“ (p. 221 f.)



David Deutsch: Optimism (XVI)

In his book "The Beginning of Infinity", David Deutsch (2011) explains how science works. He argues that progress is always possible.

David Deutsch



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„Problems are inevitable, because our knowledge will always be infinitely far from complete. Some problems are hard, but it is a mistake to confuse hard problems with problems unlikely to be solved. Problems are soluble, and each particular evil is a problem that can be solved. An optimistic civilization is open and not afraid to innovate, and is based on traditions of criticism. Its institutions keep improving, and the most important knowledge that they embody is knowledge of how to detect and eliminate errors. There may have been many short-lived enlightenments in history. Ours has been uniquely long-lived.“ (p. 222)



David Deutsch: Sustainability (I)

In his book "*The Beginning of Infinity*", David Deutsch (2011) explains how science works. He argues that within the laws of nature practically all problems can be solved by knowledge.

David Deutsch



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„I have argued that the laws of nature cannot possibly impose any bound on progress: ... denying this is tantamount to invoking the supernatural. In other words, progress is *sustainable*, indefinitely. But only by people who engage in a particular kind of thinking and behaviour – the problem-solving and problem creating kind characteristic of the Enlightenment. And that requires the optimism of a dynamic society.“ (p. 423, emphasis in original)



David Deutsch: Sustainability (II)

The Easter Islands are often cited as an example of humanity endangering itself by exploiting nature. Deutsch represents the radical counter-thesis: humanity threatens its future only through bad ideas, before all by the idea of renouncing further progress.

David Deutsch



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„The knowledge that would have saved the Easter Islanders' civilization has already been in our possession for centuries. A sextant would have allowed them to explore their ocean and bring back the seeds of new forests and of new ideas. Greater wealth, and a written culture, would have enabled them to recover after a devastating plague. But, most of all, they would have been better at solving problems of all kinds if they had known some of our ideas about how to do that, such as the rudiments of a scientific outlook. Such knowledge would not have guaranteed their welfare, any more than it guarantees ours. Nevertheless, the fact that their civilization failed for lack of what ours discovered long ago cannot be an ominous 'warning of what the future could hold' for us.“ (p. 424)



David Deutsch: Sustainability (III)

Deutsch creates the following historical picture:

David Deutsch



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„In early prehistory, populations were tiny, knowledge was parochial, and history-making ideas were millennia apart. In those days, a meme spread only when one person observed another enacting it nearby, and (because of the staticity of cultures) rarely even then. So at that time human behaviour resembled that of other animals, and much of what happened was indeed explained by biogeography. But developments such as abstract language, explanation, wealth above the level of subsistence, and long-range trade all had the potential to erode parochialism and hence to give causal power to ideas. By the time history began to be recorded, it had long since become the history of ideas far more than anything else – though unfortunately the ideas were still mainly of the self-disabling, anti-rational variety. As for subsequent history, it would take considerable dedication to insist that biogeographical explanations account for the broad sweep of events. Why, for instance, did the societies in North America and Western Europe, rather than Asia and Eastern Europe, win the Cold War? Analysing climate, minerals, flora, fauna and diseases can teach us nothing about that. The explanation is that the Soviet system lost because its ideology wasn't true, and all the biogeography in the world cannot explain what was false about it.“ (p. 428)



David Deutsch: Sustainability (IV)

Deutsch stresses the role of (good and bad) ideas in the process of civilization:

David Deutsch



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„Physical resources such as plants, animals and minerals afford opportunities, which may inspire new ideas, but they can neither create ideas nor cause people to have particular ideas. They also cause problems, but they do not prevent people from finding ways to solve those problems. Some overwhelming natural event like a volcanic eruption might have wiped out an ancient civilization regardless of what the victims were thinking, but that sort of thing is exceptional. Usually, if there are human beings left alive to think, there are ways of thinking that can improve their situation, and then improve it further. Unfortunately, as I have explained, there are also ways of thinking that can prevent all improvement. Thus, since the beginning of civilization and before, both the principal opportunities for progress and the principal obstacles to progress have consisted of ideas alone. These are the determinants of the broad sweep of history. The primeval distribution of horses or llamas or flint or uranium can affect only the details, and then only *after* some human being has had an idea for how to use those things. The effects of ideas and decisions almost entirely determine which biogeographical factors have a bearing on the next chapter of human history, and what that effect will be. Marx, Engels and Diamond have it the wrong way round.“ (p. 429, emp. i. o.)



David Deutsch: Sustainability (V)

Deutsch formulates his alternative interpretation:

David Deutsch



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„The Easter Island civilization collapsed because no human situation is free of new problems, and static societies are inherently unstable in the face of new problems. Civilizations rose and collapsed on other South Pacific islands too – including Pitcairn Island. That was part of the broad sweep of history in the region. And, in the big picture, the cause was that they all had problems that they failed to solve. The Easter Islanders failed to navigate their way off the island, just as the Romans failed to solve the problem of how to change governments peacefully. If there was a forestry disaster on Easter Island, that was not what brought its inhabitants down: it was that they were chronically unable to solve the problem that this raised. If that problem had not dispatched their civilization, some other problem eventually would have. Sustaining their civilization in its static, statue-obsessed state was never an option. The only options were whether it would collapse suddenly and painfully, destroying most of what little knowledge they had, or change slowly and for the better. Perhaps they would have chosen the latter if only they had known how.“ (p. 430)



David Deutsch: Sustainability (VI)

Deutsch makes the following distinction:

David Deutsch



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„[There are] two different conceptions of what *people* are. In the pessimistic conception, they are wasters: they take precious resources and madly convert them into useless coloured pictures. This is *true* of static societies: those statues really were what my colleague thought colour televisions are – which is why comparing our society with the ‘old culture’ of Easter Island is exactly wrong. In the optimistic conception – the one that was unforeseeably vindicated by events – people are problem-solvers: creators of the unsustainable solution and hence also of the next problem. In the pessimistic conception, that distinctive ability of people is a disease for which sustainability is the cure. In the optimistic one, sustainability is the disease and people are the cure.“ (p. 434 f., emphasis in original)



David Deutsch: Sustainability (VII)

Deutsch writes about governance:

David Deutsch



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„[T]here is no resource-management strategy that can prevent disasters, just as there is no political system that provides only good leaders and good policies, nor a scientific method that provides only true theories. But there are ideas that reliably cause disasters, and one of them is, notoriously, the idea that the future can be scientifically planned. The only rational policy, in all three cases, is to judge institutions, plans and ways of life according to how good they are at correcting mistakes: removing bad policies and leaders, superseding bad explanations, and recovering from disasters.“ (p. 436)

„Only progress is sustainable.“ (p. 436)



David Deutsch: Sustainability (VIII)

Deutsch stresses the link between politics and (un)knowledge:

David Deutsch



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„Trying to predict what our net effect on the environment will be for the next century and then subordinating all policy decisions to optimizing that prediction cannot work. We cannot know how much to reduce emissions by, nor how much effect that will have, because we cannot know the future discoveries that will make some of our present actions seem wise, some counter-productive and some irrelevant, nor how much our efforts are going to be assisted or impeded by sheer luck. Tactics to delay the onset of foreseeable problems may help. But they cannot replace, and must be subordinate to, increasing our ability to intervene *after* events turn out as we did not foresee. If that does not happen in regard to carbon-dioxide-induced warming, it will happen with something else.“ (p. 440, emphasis in original)



David Deutsch: Sustainability (IX)

Deutsch writes about the option of preventing harm:

David Deutsch



„There is a saying that an ounce of prevention equals a pound of cure. But that is only when one knows what to prevent. No precautions can avoid problems that we do not yet foresee. To prepare for those, there is nothing we can do but increase our ability to put things right if they go wrong. Trying to rely on the sheer good luck of avoiding bad outcomes indefinitely would simply guarantee that we would eventually fail without the means of recovering.“ (p. 440 f.)

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Martin-Luther-Universität Halle-Wittenberg, Lehrstuhl für Wirtschaftsethik
Prof. Dr. Ingo Pies

David Deutsch: Sustainability (X)

Deutsch expresses the following opinion on climate policy:

David Deutsch



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„The world is currently buzzing with plans to force reductions in gas emissions at almost any cost. But it ought to be buzzing much more with plans to reduce the temperature, or for how to thrive at a higher temperature. And not at all costs, but efficiently and cheaply. Some such plans exist – for instance to remove carbon dioxide from the atmosphere by a variety of methods; and to generate clouds over the oceans to reflect sunlight; and to encourage aquatic organisms to absorb more carbon dioxide. But at the moment these are very minor research efforts. Neither supercomputers nor international treaties nor vast sums are devoted to them. They are not central to the human effort to face this problem, or problems like it.

This is dangerous. There is as yet no serious sign of retreat into a sustainable lifestyle (which would really mean achieving only the *semblance* of sustainability), but even the aspiration is dangerous. For what would we be aspiring to? To forcing the future world into our image, endlessly reproducing our lifestyle, our misconceptions and our mistakes. But if we choose instead to embark on an open-ended journey of creation and exploration whose every step is unsustainable until it is redeemed by the next – if this becomes the prevailing ethic and aspiration of our society – then the ascent of man, the beginning of infinity, will have become, if not secure, then at least sustainable.“ (p. 441, emphasis in original)



David Deutsch: Sustainability (XI)

Deutsch draws the following conclusion:

David Deutsch



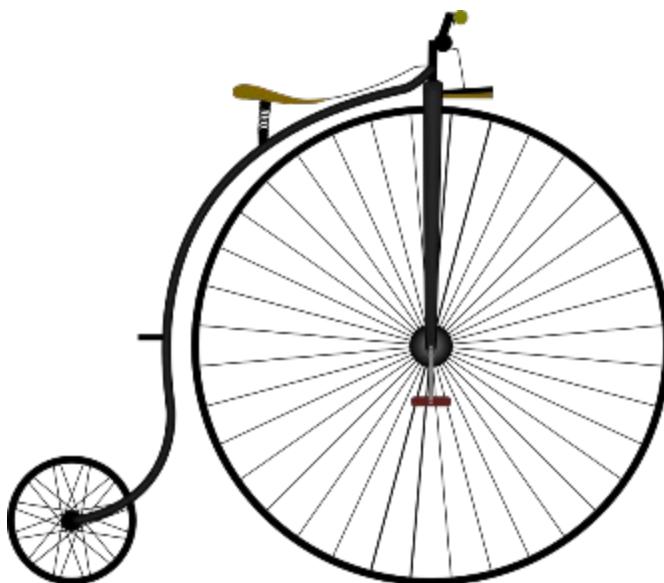
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„Static societies eventually fail because their characteristic inability to create knowledge rapidly must eventually turn some problem into a catastrophe. Analogies between such societies and the technological civilization of the West today are therefore fallacies. Marx, Engels and Diamond's 'ultimate explanation' of the different histories of different societies is false: history is the history of ideas, not of the mechanical effects of biogeography. Strategies to prevent foreseeable disasters are bound to fail eventually, and cannot even address the unforeseeable. To prepare for those, we need rapid progress in science and technology and as much wealth as possible.“ (p. 442)



An Ordonomic Summary: The Bicycle Metaphor

*The change from high-wheel to bicycle is a significant technical (and social) advance. Nevertheless, the logic of driving remains the same: when you get into a swirl, you have to pedal and drive **faster!** – Nota bene: No position that you take dynamically to move forward is statically stable. The balanced driving consists of a clever succession of static imbalances.*



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