Studies in Religion and the Environment
Studien zur Religion und Umwelt

published on behalf of the
European Forum for the Study
of Religion and the Environment
by

Sigurd Bergmann

Volume 2

LIT

Sigurd Bergmann, Dieter Gerten (Eds.)

Religion and Dangerous Environmental Change

Transdisciplinary Perspectives on the Ethics of Climate and Sustainability

LIT

Cover Picture: Hardy Brix, *Arktisk Landskab*, 2008 (above)
Hardy Brix, *Arktisk Landskab 2*, 2006 (below)
Hardy Brix, *Arktisk Landskab 4*, 2006 (back cover)
© Hardy Brix

Gedruckt auf alterungsbeständigem Werkdruckpapier entsprechend
ANSI Z3948 DIN ISO 9706

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at http://dnb.d-nb.de.

ISBN 978-3-643-10093-1

A catalogue record for this book is available from the British Library

Fresnostr. 2 D-48159 Münster
Tel. +49 (0) 2 51-620 320 Fax +49 (0) 2 51-922 60 99
e-Mail: lit@lit-verlag.de http://www.lit-verlag.de

Distribution:
In Germany: LIT Verlag Fresnostr. 2, D-48159 Münster
Tel. +49 (0) 2 51-620 32 22, Fax +49 (0) 2 51-922 60 99, e-mail: vertrieb@lit-verlag.de
In Austria: Medienlogistik Pichler-ÖBZ, e-mail: mlo@medien-logistik.at
In Switzerland: B + M Buch- und Medienvertrieb, e-mail: order@buch-medien.ch

In the UK: Global Book Marketing, e-mail: mo@centralbooks.com

In North America by:

Transaction Publishers
New Brunswick (U.S.A.) and London (U.K.)

Transaction Publishers
Rutgers University
35 Berrue Circle
Piscataway, NJ 08854

Phone: +1 (732) 445 - 2280
Fax: + 1 (732) 445 - 3138
for orders (U. S. only):
toll free (888) 999 - 6778
e-mail: orders@transactionpub.com

The Cultural Dimension of Un/Sustainability

Delicate Distinctions between Societal Survival and Collapse

Davide Brocchi

"Why do some societies make disastrous decisions?" asks the evolutionary biologist Jared Diamond in his most popular book "Collapse".[1] This question is valid for our society too, in spite of its "progress". 48 years after *Silent Spring* by Rachel Carson;[2] 38 years after the UN-Conference on Human Environment in Stockholm; 18 years after the UN-Conference for Development and Environment in Rio de Janeiro, the main indicators of the *global crisis*[3] continue to increase – in some cases exponentially. Seemingly the reality of our society isn't as dynamic as its image: it is time to ask, what hampers and what might promote a change into sustainability. The present chapter provides some inputs for research and a discussion in this direction and classifies them into four categories: complexity, order, dynamics and evolution.

While an *unsustainable development* leads sooner or later into societal failure, the main goal of a *sustainable development* is to avoid dead ends in "social evolution".[4] The central thesis of this text is that, though social and cultural factors play a central role in unsustainable development, they can also be decisive in a development turn towards sustainability.

We could say the same of religion, a fundamental aspect of culture. Although I am not an expert in religious studies, I will make some reflections about the main religion of the culture area in which I grew up, Catholicism. Is it by chance that the causes of the global crisis can be found in societies, which are characterised by their Christian history? Vice versa, can Christianity promote sustainability?

Before a deeper analysis, it is worth to revisiting a concrete case of societal collapse in view of the above mentioned thesis. The tale of the Rapanui people on the Easter Island is particularly important, because it seems to dissolve the complexity of our own global crisis into a lucid, but disquieting metaphor.

Rapanui's lesson

"The overall picture for Easter is the most extreme example of forest destruction in the Pacific, and among the most extreme in the world: the whole forest gone, and all of its tree species extinct", writes Diamond in "Collapse".[5]

Til 1100 CE this island was covered by a subtropical broadleaf forest, with trees of up to 30 meters high. Then the forest and biodiversity decreased ever more. The last medium-sized and large trees were gone by around 1650, 70 years before the landing of the first Western navigator, the Dutch Jacob Roggeveen.

The causes of such a dramatic devastation cannot be natural, as scientific research confirmed. Diamond's thesis is that the inhabitants of the island destroyed the forest by themselves. The Rapanui exhausted the resources of this small island to build more than a thousand of the massive stone statues: the enigmatic *Moai*.

Several clues confirm Diamond's theory. The Rapanui used a lot of wood and ropes to transport the massive statues over distances up to 15 km, between the quarry and the installation-places. The second ecologic impact of the "Moai industry" came through the surplus of food that was necessary to pay the workers. But the expansion of the agriculture at the expense of the forest was caused also by the growing population on the island, that probably exceeded 15,000.[6]

The increasing destruction of the ecosystem and the intensive exploitation of the cultivated area led to a chain reaction. The loss of forest cover caused increased erosion that damaged cultivable land: the Rapanui replaced it through clearing other parts of forest. Without wood it became difficult to overcome the cold winter and to fabricate good canoes for fishing. Due to the lack of food the Rapanui began to eat sea birds.

From the middle of the 17th century the Easter Island's biodiversity rapidly decreased. The ecologic collapse led to a societal collapse: more and more people died of starvation, there were cases of cannibalism, it came to social conflicts and even civil wars. When the navigator Roggeveen landed, he found no more than 3,000 people on the island. They looked "emaciated, anxious and miserable", Captain Cook wrote in 1774.[7] The survivors were decimated in the following century by the diseases introduced by the Whites, or finished by Peruvian enslavement. 1877 the French anthropologist Alphonse Pinart counted only 111 Rapanui individuals on the island.

The Rapanui "had the bad luck among all the peoples of the Pacific area, of living in the most delicate environment and it holds the big risk of an irreversible forest loss".[8] But "bad luck" and "delicate environment" cannot fully explain why a people worked 500 years long on a very small island for destroying its own livelihood so systematically.

What did hinder a development turn into sustainability on the Easter Island? Probably the combined action of three aspects:

a) *Social inequality*. The Rapanui's society was subdivided into elite and common people. The common people were forced to build their houses in the inland, while the headmen and their families were allowed to live nearby the coast, in relatively big houses (*hare paenga*) made of straw, with a basalt floor and a terrace facing the ocean.[9]

   The societal development was determined by a minority for the interests of a minority. Why should the elite be interested in a societal change? As the elite was the driving force behind the construction of the Moai, the costs of that development were mainly transferred to the common people. The survival of the common people depended on the headmen, who controlled the whole stockpiling, transport and distribution of food.

b) *Competition*. The island was subdivided into eleven different territories, each one controlled by a headman and his clan. The clans were constantly involved in a competition to achieve the highest social status that was symbolized by the highest Moai.[10] This fight for the social status hindered a perception of "real" problems and a cooperation for their solution. The competition was not only the cause of the "progress" (the statues became bigger and bigger), but also of the growing environmental devastation. So it is not by chance that the biggest Moai was also the last one to be erected.[11]

c) *Ideology*. Without considering the cultural dimension, it becomes very difficult to grasp the "irrationality" behind the construction of more than thousand Moai and the reason why this society sacrificed so many resources and lastly its own existence. The Moai were artistic status symbols that marked the difference between elite and common people. These statues represented the high-ranking ancestors and also had a religious function. This mix of social and religious symbolism mirrored also the link between headmen and priests. They legitimated their power in two ways: through the assumption of a close relationship with the Gods and through several promises to the common people, for example of prosperity and of a rich harvest. This "ideology" was supported by monumental buildings and ceremonies that had to impress the common people.[12] The costs of such "power-demonstrations" were paid by the common people, through the expropriation of the surplus of their food-production.

What happened when the first signs of the crisis became evident? The headmen and the priests convinced the common people, that sacrifices were necessary to appease the ancestors and to get prosperity and good harvests again. Maybe this is the motive for the construction of the enormous Moai after 1600.

The combination of these three characteristics made the social system rigid in the face of necessary changes – and led to its own demise. The reality of a deepening crisis could not be blurred forever: more and more people suffered due to the lack of food. All the sacrifices and prayers to ancestors and Gods brought nothing. What

was holy before, became suddenly the target of a deep and diffused aggression.[13] The competition for the best status increasingly turned into armed conflicts and civil wars. Around 1680 a coup by military leaders called *matatoa* overthrew the headmen and the priests and brought a new cult based around a previously unexceptional God *Makemake*. Nonetheless the *tipping point* of the societal collapse had been already passed and was now irreversible. "Not only the old political ideology had been a failure, but also the old religion."[14]

Complexity

The Rapanuis felled all the trees every one, although they needed canoes to leave one of the world's most isolated inhabited islands: "could they really be that stupid?"[15] This question is legitimate, but the "stupidity" isn't only a characteristic of the Rapanuis' people: somewhere everybody suffers from *derealisation*.

Knowledge (of the truth) is a precondition of right behaviour (ethics),[16] but because we cannot know, remember or foresee everything, we make mistakes. Our cognitive capacities are limited: sometimes we do things, we wouldn't do, if we remembered similar mistakes in the past or would know with certainty every future consequence of our behaviour.

The *cognitive limits* belong to the nature of the human being. An important corollary of this assumption is *cultural relativism*:[17] every worldview, religion, theory, value or opinion is only the expression of a *viewpoint* among others. "Relative" doesn't mean "false". A viewpoint is also relative, because it is *related* to a reality but not able to grasp that reality at all.[18] Just as *the map is not the territory*,[19] although it refers to the territory.[20]

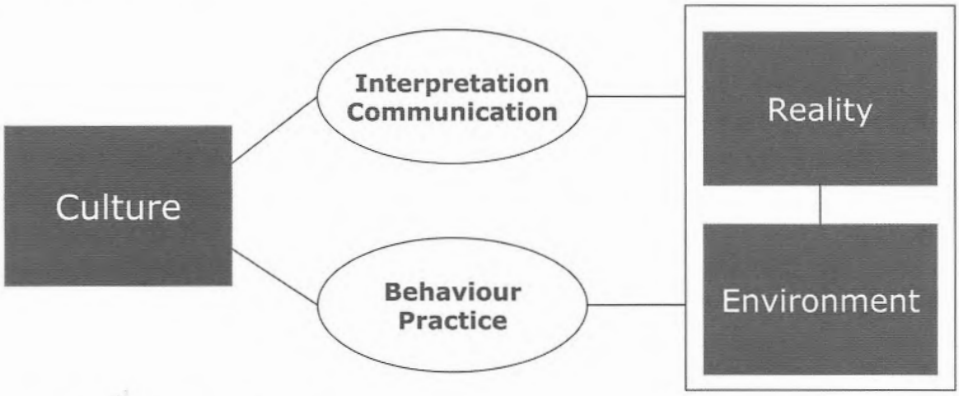
How do humans comprehend the complexity in spite of their cognitive limits? By reducing the complexity. A really simple answer, but with dramatic consequences. Our perception of reality is a selective one. Our worldview is a *construction* of reality, a *cognitive map*[21] of the environment.

Humans have an individual will. Johannes Kepler and Galileo Galilei defended their discovery, that the earth rotates around the sun, against the dominant worldview of that time. But nobody can isolate himself completely from the rest of humanity; nobody endures a situation of absolute loneliness. The nature of the human being is a communicative, social and sexual one: relationships among humans are as essential as networks for neurons.[22] Therefore the construction of reality can be only a *social* one.[23]

For the social construction of reality humans need common codes and systems of meanings, that permits us to think about the world and communicate about it with each other. This cognition leads to a semiotic definition of culture as *software of the mind*.[24] Culture is a *collective cognitive map* – but there can be very different maps of

the same territory (v. cultural diversity). That every generation inherits a culture from the previous one (everybody has been "born" as Catholic or Muslim and so on...), doesn't exclude a subjective or historic dynamic in the culture.[25]

Every culture makes an environment into a *world*. Paraphrasing Ludwig Wittgenstein,[26] the limits of our world are the limits of our culture. We don't reduce complexity only through interpretation, but also through values and norms that steer our behaviour, the selection of priorities, the development of new technologies, and the use of machines. Culture represents the societal blueprint that runs through societal development.



1 The double selective function of culture

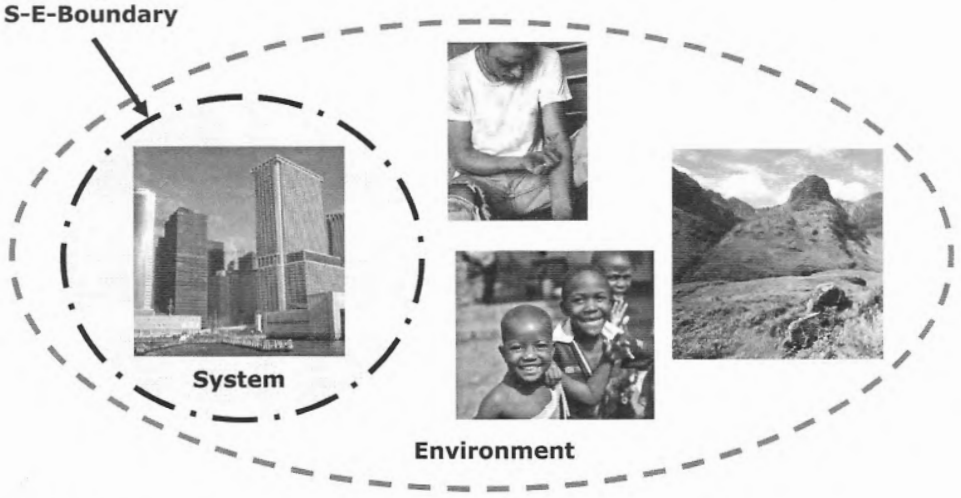
Social systems represent a double reduction of complexity on the basis of cultural patterns. For Niklas Luhmann the boundary between social system and environment is a *difference*. This difference depends on three factors: besides the cultural viewpoint (the "observer" in Luhmann's theory) and the cognitive limits there are also *limits of governability*. Humans cannot control complexities. The Rapanui were even overtaxed by self-caused problems. Especially exponential processes and mechanisms of self-alimentation (tipping points) make crises uncontrollable.

The boundary of every social system is the limits of its particularly language, way of thinking, knowledge, resource-availability and management-capacity. We could describe this boundary as a relative point on a continuum, for example between usual and unusual.

The boundary between social system and environment is as relative as the culture, but it marks a distinction between inclusion and exclusion. Outside of our system there is not only an *ecological environment*, but also an *emotional environment* (e.g. the "subconscious", in its deep psychological meaning), a *social environment* (e.g. people we exclude) and a *multicultural environment* (the many cultures that we experience as foreign cultures). A culture behaves towards these environments in the same way.

Social System	Environment
Near	Far
Important	Unimportant
Graspable	Ungraspable
Known	Unknown
Own	Foreign
Trust	Mistrust
Security	Insecurity
Controllable	Uncontrollable
Useful	Useless
Order	Chaos

Table 1: *Boundary between social system and environment*



2 The multidimensionality of the environment

Which inputs can the perspective above offer to the analysis on un/sustainability? I will resume them in four points.

THE HUMAN LIMITS TO GROWTH

We use everyday words like "globalization" and "nature" as if we could keep such realities in our hand. Governments should guarantee jobs for all, fight terrorism in Afghanistan and tackle at the same time climate change. The truth is: we cannot even comprehend and control the complexity of our own personality, as Sigmund Freud discovered. Therefore we should complete the thesis of Dennis Meadows on

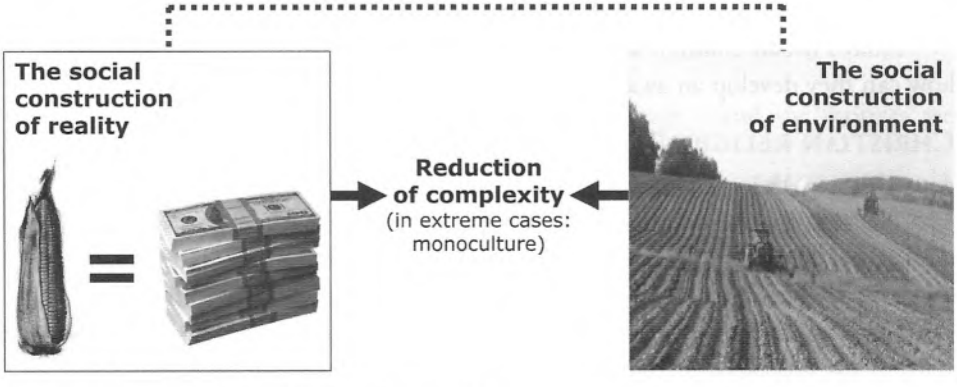
the Biophysical Limits to Growth[27] with an additional dimension: the *human limits*. Not only the planet is limited, but also the human being, that steers the growth and is steered by it. The human brain is relatively big, nevertheless limited. Individuals cannot "function" in a complex social system and at the same time solve complex environmental problems. Humans aren't Gods, but consist of 70 percent of water. The human being remains limited in spite of cultural differences or the level of societal development – and that could explain why the indigenous society of the Rapanui as well as the modern society isn't immune from ecologic problems.

The universalization of the viewpoint

Humans are not able to reach universal truths, but unfortunately they are able to universalize the (own) relative truths. An example: in the western worldview money is indispensable to survive, the modern city is a trusted social system, whereas the tropical forest is a chaotic environment. The perspective of indigenous peoples is probably opposite: while the forest is a trusted system, money is nothing to eat and modern cities stink. Unfortunately the relativity of these two different cultural viewpoints is obscured by the *structures of social inequality*, in particular by hierarchical relationships. Globalization universalizes a relative viewpoint together with the power of (limited) persons and institutions. The habitat of indigenous people is destroyed for the production of goods for the global market.

The self-referentiality of development

The material results of development are less relative than the cultural patterns that drive development. The immaterial "walls" in the minds can become physical walls, whose existence is objective and indisputable.



3 The link between culture and societal development

Between the social construction of reality and the social construction of environment there is a continuous interplay: the culture shapes the society that in turn shapes

the culture. Pierre Bourdieu would speak of "structured structuring structures",[28] Hartmut Esser of "co-evolution".[29]

In globalization a rational simplification of reality leads to an industrial simplification of environment. While controllable, useful and trusted things are internalised into the social system, disorder, useless things, contradictions and alternatives are banned from the environment.

Globalisation is a form of rationalising development that makes a part of the environment controllable by transforming it into an artificial world that mirrors the dominant worldview.

The assumptions of the founders of modern sciences[30] should be reinterpreted from another viewpoint: only the world that is structured according to mathematics can be explained by mathematics in an exact way.

The self-reflexivity of development

Winston Churchill once said: "We shape our buildings, and afterwards our buildings shape us".[31] We are a part of the same reality and environment which we are interpreting and transforming at the same time. Max Horkheimer wrote that through the rationalisation of society through technologies, not only the external nature of the human being becomes controlled, but also his/her internal nature.[32] The dominance over nature includes intrinsically the dominance over human beings.[33]

The artificialisation of the environment as well as the virtualisation of the reality is changing the human being itself. Generation after generation we are increasingly separating ourselves from nature, making us dependent on artificial things, that were not really missing till some years ago. "If everybody drives a car, I need a car": first the wide spreading (globalization) of "new pseudo-needs" make them into unalienable premises of social integration/identification.

Today's urban children know more heroes from Japanese mangas than plants:[34] how can they develop an awareness of nature?

Christian religion and complexity

According to the sociologist Richard Münch "a distinctive characteristic of the Jewish-Christian religion in comparison to the other world religions isn't only the intellectual rationalization – with roots in Hellenism and in the Enlightenment – but much more the central position of the active designing of the world after religious-cultural ideas (social rationalization)".[35] Is the Jewish-Christian religion the cultural cause of the industrial reduction of complexity and diversity in the modern society?

In the dealing with complexity there are some aspects of the Christian religion that deserve critical attention. The Jewish-Christian tradition extols the "difference" between system and environment with a strong "separation" between Heaven and Earth or body and soul. "Especially in its Western form, Christianity is the most

anthropocentric religion the world has seen."[36] The dogma of "papal infallibility" risks making a human into God.

But in Christianity there are also aspects that promote a more open dealing with complexity. In the "Sermon on the Mount"[37] Jesus Christ warned against "false prophets". Many Christians make the emarginated part of the Creation to the centre of their work and mission.

Order

Everyday in the industrialised nations we can find enough food in the supermarkets of our cities; every month we receive wages for our labour; we can trust people that we meet on the street.

The social order is our daily *normality*, but societal crisis show us that such order is nothing obvious. It does not matter if the social order is called globalization or sustainability: the survival of billions of people depends on that, particularly those who live in urban regions and cannot produce food for themselves.

Cultures are operating and normative systems that guarantee that every social order works. They are internalized by every individual through *socialization*.

If culture structures the social order and sets its environmental boundaries; if culture regulates the exchange between social system and environment, then the environmental crisis is a cultural crisis too and needs cultural solutions.[38] If the culture is the blueprint of the society, then the most durable and deep societal change is a cultural one. If every development model is a cultural programme, then *another development*[39] needs *another culture*.

The notion of *culture of sustainability*[40] is a hypothesis of action-research in this direction, as discussed in the following.

Elements of a culture of sustainability

The definition of a culture of sustainability is a challenge – and the motives are different:

- Today what is called "sustainability" is not always sustainable and what contributes to sustainability is not always called so. The same word has different meanings in different sub-cultural contexts.
- A "culture of sustainability" cannot be a list of morals or even of "socially expected answers". More important are the deeper and sometimes unconscious aspects of cultures. But how can such aspects be "rationalized" and "normalized"? Or should a culture of sustainability speak the language of emotions?
- No monoculture is sustainable. Every culture is the expression of a viewpoint – and it is valid also for a "culture of sustainability".

The definition of sustainability shouldn't be reduced to the institutional ones of the *Brundtland Report* (1987) and of the *Agenda 21* (1992).[41] The public and scien-

tific debate on fair and ecological development models is much older. Its institutionalisation through the United Nations isn't necessarily a strengthening, but the result of neutralizing compromises of "United Governments", that do not contain any systemic critic and are often oriented toward an abstract future.[42] The document *What now? Another Development* by the Dag Hammarskjöld Foundation (1975)[43] – for example – gave much more attention to the radical demands from *Eco-Development approaches* and *Dependencia Theories*.[44]

An important novelty of the debate on sustainability is the awareness of the interdependence of topics that were considered separately before (e.g. biodiversity, climate change, work, social justice, democracy, peace, human rights). Therefore a "culture of sustainability" means first to re-define a wide *system* of notions on the basis of their interrelations.

A culture of sustainability is the result of an *enlightenment* from the modern myths of progress, profit, growth, performance, competition, acceleration and private property.

The *change of paradigms* could be oriented to the following arguments:

- *Everything is connected with everything*.[45] The *interconnected thinking*[46] outpaces the Cartesian separation between *res extensa* and *res cogitans*,[47] nature and society, object and subject, external and internal nature of the human being.
  Systemic interactions can be described better through circular processes of feedback than through linear chains of causes and effects. The roots of a culture of sustainability are in the Greek and in the Far Eastern "cultures of circulation", because the ecologic balance is based on circular and not on linear processes.[48]
- *Nature knows best*. Ecosystems are an example of successful sustainable development, maybe the only ones we know. Genes store and reproduce the results of four billions years of biological evolution. In the ecosystem there are no parasites, nothing is useless, but everything has its own value. Natural ecosystems produce an enormous amount of biomass without creating any waste. Why do we prefer to replace nature through imperfect artefacts, instead of learning from that?
- *The awareness of limits to growth*. An "unlimited" economic growth combined with an exploding world population will lead to a societal collapse.[49] For a "good life"[50] the society needs today more decrease than growth; a fair redistribution of resources instead of an increasing inequality.[51] The actual decreasing birth rate in countries like Germany should be considered a huge opportunity – and not a huge curse. The world population of 2.5 billion in 1950 would offer much better possibilities to combine sustainability and prosperity than the expected population of 9 billion in 2040.
- *An "environmental" definition of responsibility and freedom*. The possibility to consume drugs, to spend a holiday in Miami or to choose among many products cannot really replace the real freedom of disobeying an unsustainable and sometimes

senseless social system; the freedom of self-realization has wider horizons. And that freedom is the real responsibility, because responsibility is neither obedience to the hierarchy nor a sense of duty in regard to the own company.

Because a "monoculture of sustainability" is a contradiction in terms, it is more correct to speak of different *cultures* of sustainability. These must not necessarily be invented. We can learn a lot from existing and past cultures, which were terminated by the colonisation or are endangered today by *the Westernization of the World*.[52]

The West can learn from its own history too. Two World Wars, Hiroshima, Chernobyl, financial crisis, climate change, etc. have turned this civilization into a rather low point of human development. According to the critic of modernity by Zygmunt Bauman, "first the rational determined world of the modern civilisation makes the holocaust possible".[53] A *collective memory*[54] is a good strategy against the repetition of such failures.

Christian religion and culture of sustainability

"The Historical Roots of Our Ecological Crisis" was the title of an article published in 1967 by Lynn White, Professor of History at the University of California. His central thesis: "By destroying pagan animism, Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects."[55] What caused the "huge burden of guilt" that Christianity bears?[56]

For White the modern science is "an extrapolation of natural theology". The Jewish-Christian tradition is not only responsible for a dualist view of the world, but also for a negative denotation of a part of the creation (Earth, nature, animals and body) in comparison to the otherworldly one (Heaven, human being and soul). In the same way the "mechanistic sciences" consider the soulless part of creation as a machine.[57]

With his program on "mastery over nature"[58] Francis Bacon wanted to realise what was written in the book of Genesis (1:28). God's appeal "Be fertile, increase in number, fill the earth, and be its master. Rule the fish in the sea, the birds in the sky, and all the animals that crawl on the earth" has never been more successful than in the last century.

Lynn White appealed for *an alternative Christian view*: "I personally doubt that disastrous ecologic backlash can be avoided simply by applying to our problems more science and more technology [...]: Despite Copernicus, all the cosmos rotates around our little globe; despite Darwin, we are not, in our hearts, part of the natural process [...] What we do about ecology depends on our understandings of the man-nature relationship. More science and more technology are not going to get us out of the present ecological crisis until we find a new religion, or rethink our old one [...] Possibly we should ponder the greatest radical in Christian history since Christ: Saint Francis of Assisi."[59] The "Canticle of the Sun" and the "Canticle of the Creatures" by

Francis of Assisi is a lesson of appreciation of the environment. White's appeal was the beginning of a new debate and orientation that is called *ecotheology*.

A sustainable influence of religion in general on society could be taken from the theories of the French sociologist Emile Durkheim. He described religion as "cement", which holds a society together in spite of the progressive division of labour and of utilitarianism.[60] If this cement becomes weaker (anomie), then social inequality and conflicts increase, as well as depression and the suicide rate.[61] At this point it is appropriate to ask in what way the unsustainability is a form of anomie, caused by a weakening solidarity and a parcelling of knowledge – and if a strengthening of the religious cohesion can promote a more sustainable development.

Unfortunately, Christian solidarity is not always unconditional. The subordinated role of the woman, the strong sexual moral and the difficultly dealing with different opinions within the Catholic church show, how community sense can force conformity instead of solidarity.

The economic politic of several "Christian parties" seems to confirm the thesis of Max Weber that the spirit of Capitalism has religious roots.[62] In the Middle Age God's indulgence could be "bought": the power accumulation increased the possibility to save ones own soul. Pope Leo X offered in 1517 indulgences for those who gave alms to rebuild St. Peter's Basilica in Rome. Martin Luther protested against this practice:[63] indulgence does not need any mediator and is an inner question between God and individual. Today we should ask: can the social and ecologic sins behind capital accumulation really be "excused" by prayer, charitable donations or sponsorships?

Dynamics

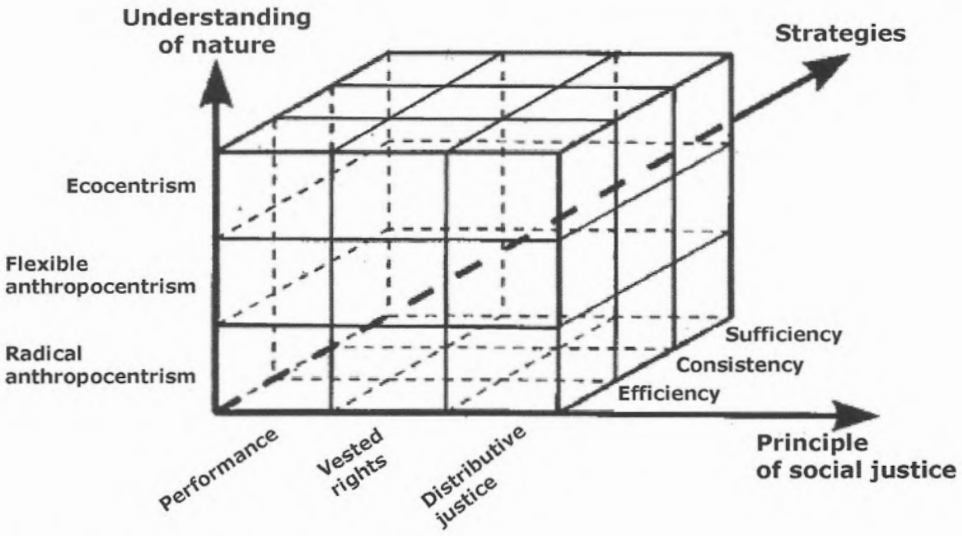
A central thesis of the previous chapter was "another development needs another culture". But how can we change the structures of our societal system and the dominant way of thinking? A *socio-cultural strategy for sustainability* is needed.

Elements of a socio-cultural strategy for sustainability

Ends do not justify means. The concrete result of a social and cultural change is the consequence of a strategy and of a process too – and not only of planned aims.

Every strategy for social change is designed according to a worldview that should be critically examined. Michael F. Jischa[64] classifies the most eminent strategies for sustainability (Efficiency, Consistency and Sufficiency)[65] in a matrix of different understandings of nature and social justice.

The strategies for sustainability should be examined against the background of the *understanding of humanity* too. In the Western culture at least two schools of thought could be distinguished:



4 Matrix of Sustainability by Michael F. Jischa (1999)

- The first one is oriented to the negative understanding of humanity by the English philosopher Thomas Hobbes. Because the human being has an evil nature, we need laws and contracts, whose respect is guaranteed through the authority of the State.[66] Hobbes' philosophy was influenced by the cruelties of the Thirty Years' War that ended in 1648 with the Peace of Westphalia, which can be considered the first international peace treaty.
- The second one is based on a positive understanding of humanity. Immanuel Kant pleads the cause of culture not as civilization superstructure, but as reflection of an inner morality, that can be promoted through an organic education. Jean-Jacques Rousseau goes beyond that: human nature is good, but the constraints imposed by society and morals hinder the self-reliance: this repression makes humans into bad people. For Rousseau to free the human being from these "cultural chains" is the precondition for a peaceful coexistence. The French philosopher is a forerunner not only of the "culture critique", but also of psychoanalysis:[67] Freud's thesis of the human perversion as a consequence of an over-moral *Super-Ego* is not so far from Rousseau.

Several indicators are that our society is dominated by a negative understanding of humanity. Individualism, free competition, private property and privatisation could be expressions of the motto "one can really trust only oneself". We have to sign written contracts, because the spoken word isn't trustworthy enough. Army, police and bureaucracy are the result of an institutionalized mistrust of humanity.

The negative understanding of humanity is an important engine for scientific and technological progress. Because the human being is limited and imperfect, its capac-

ities are supplemented by technologies[68] or substituted by more precise computers. "Social engineering" can prevent social conflicts and improve the collective efficiency. "Mistakes" or "unpleasant surprises" are avoided by automating social processes.

The debate on a strategy for sustainability is not free from this worldview, as the history of the German notion of *Nachhaltigkeit*[69] shows. In German forestry of the 18th century "Nachhaltigkeit" meant to harvest no more trees than can grow.[70] Later this principle was integrated by the aim of yield maximization.[71] The "sustainable forest management" has been able to guarantee that today 31 percent of the German territory is still covered by forest. But this forest is far from its original natural state. It is more an artificial and utilitarian construct, dominated by a few profitable species of trees, singly catalogued by age. The low biodiversity makes the forest prone to diseases and damages: actually only 31 percent of the German forest are completely healthy.[72]

Nevertheless some strategies for sustainability are oriented to the logic of the "sustainable forest management": they understand sustainability as additive *rationalization*, *optimization* and *modernization* of the society through knowledge, technology and norms. While the ideal head of such a strategy consists of experts, scientists, engineers and responsible managers (it reminds a little of Plato's Republic lead by philosophers), the democracy is a necessary evil, that guarantees legitimization and a *supporting participation* to a *top-down strategy*.

The socio-cultural strategy is based on a different understanding of sustainability. The main differences concern the following points:

- While the socio-cultural strategy aims for systemic and structural changes (because the causes of the global crisis are systemic and structural), the strategy for "sustainable growth" or of "carbon trading" aim for protecting the given social order through corrections.[73]
- Rationalization often happens through quantification and determination: while economic and technological aspects are centralized, social and cultural factors are instrumentalized, subordinated or even faded out. In "eco-modernization"[74] the same rationality that caused the crisis becomes the leading light of sustainability. At the same time cultural differences and traditions are considered disruptive factors that should be removed.[75]

  Instead socio-cultural strategies start from the assumption, that the main causes of the global crisis have a social and cultural origin – and should be counteracted on their own terrain. Social justice can be a strategy for the solution of ecologic and economic problems (e.g. sharing instead of possessing). Emotions are existential bridges to the external and inner nature of the humanity, whereas traditions can be proven strategies for survival in a specific environment.
- Every kind of modernization means a substitution of nature through artificiality – and does not really consider biophysical and human limits. Human life becomes

part of an efficient machine, whose complexity is meanwhile so high that it occupies massive intellectual and material resources: After a hard day of work nobody really has time for managing environmental crises or developing alternatives.[76] This quasi-totalitarian machine radiates a diffuse sense of security: the actual economic crisis shows how false and dangerous that feeling can be.

The socio-cultural strategy for sustainability starts from an awareness of the biophysical and human limits – and it means first a relief of the social systems. The motto "less is more" leads to a revaluation of the immaterial aspects of life and makes surely more sense than working overtime for high military expenditures or an unequal and virtual economic growth.

- Globalization aims for a reduction of complexity in a space, that should be as wide as possible (deterritorialization),[77] and in a period of time, that should be as short as possible (acceleration). In wide spaces there is a gap between institutions and citizens: the "media democracy" replaces the participated one. Globalization virtualizes social communication and privatizes public spaces and goods. Is a "social-ecologic globalization" really possible and desirable?

  Social-cultural strategies support the formation of *self-sustainable regions*,[78] whose dimension accords more to human limits. Democracy as well as fair economy can be better realised in small communities, where people meet, know and *trust* each other. The accent of this strategy is on public spaces and on face-to-face communication. Regions promote a *re-territorialization* of the economy and a cultural identification with the own landscape. A regionalized economy is less dependent on transport and petroleum than a globalized one. Regional "mistakes" can be better absorbed than global ones. Every region can learn from the others: cultural and political exchange is a matter of priority in comparison to the economic one.
- Top-down strategies risk legitimating the same social asymmetry that contributes to unsustainable development, or even the necessity of eco-dictatorships. Instead socio-cultural strategies aim for a "real" democracy, not as legitimization of a central power through occasional elections, but as an organizational expression of a "natural" principle: that the individual capacity to comprehend and to govern complexity can be expanded through dialogue and cooperation with other people (and not necessarily through technology). The precondition of this idea is a positive and evolutionary understanding of humanity.
- The socio-cultural strategies assume a "failure of the centrality", plead for a rediscovery of the *creative marginality*[79] and look for *change agents* in the "peripheries". Change agents "mustn't be invented, because they already exist as contradictory energies within the dominating social system. They are a multi-universe of subjects, behaviours, associations, deviant practices, cultures, that should be 'freed' from their ecologic or economic niches and supported in building the networks of 'cosmopolitan localism'."[80] *Networks* can combine different aspects, like local

and global, diversity and commonality, autonomy and unity. Therefore they are an ideal organization form for new types of *transversal alliances* between civil society, sustainable economy and culture (as societal sector). The universities, the churches or the abandoned villages in East Germany can become important *laboratories for sustainability* (or *sustainability pioneers*), in which new lifestyles and economy models can be tested and developed.[81]

A fundamental aspect of the socio-cultural strategy for sustainability concerns communication and media. For Luhmann no "presumable objective fact", not even an ecologic catastrophe, has any social effect, "as long as man does not *communicate* on that".[82]

Every culture needs *media* to be socialized – and this assumption is valid for a culture of sustainability too. *Media* makes communication between people independent from their distance as well as symbols makes the communication of objects independent from their physical presence. Through books, newspapers and television we can also "perceive" realities outside of our cognitive limits.[83] Through post, telephone and emails we can send instructions in places, we cannot manage personally. Through money we can trade with people whom we do not know. In globalization the construction of reality is a medial one.[84] The globality is *mediated* to us through technologic media. The international institutions, market and companies are *medial phenomena*: it is their strength, but also their weakness.

In the national state, military and police were a fundamental instruments of social control and of power expansion. Fordism brought this hierarchical and efficient organisation form into the factories.[85] This kind of power was visible, graspable, but also attackable, for example by trade unions.

The social order of globalization is different, guaranteed by a *cultural industry complex*.[86] It spreads the same values, modes, *logos*[87] and architecture around the world; universities that teach the same neoclassical economy models; newspapers that publish the same press release from the same press agencies.[88] "The television as vehicle of cultural globalization transmits the ideal of lifestyle of an American middle class family."[89]

Today the social system defuses the danger of a structural change not only by excluding, but also by appropriating alternatives: successful subcultures become commercialized or institutionalized;[90] public relations departments adapt the notion of sustainability to their own aims. This kind of power is diffuse, invisible and ungraspable, but very effective and difficult to attack.

Fortunately it has also some weaknesses that serve the socio-cultural strategy for sustainability. For example:

– A medial phenomena is somewhere also a virtual one. The financial markets show how powerful virtuality can be.[91] The actual financial crisis shows how fragile and replaceable virtuality can be.

- The existence of media depends on the presence of transmitters and receivers – and humans are fortunately not as controllable as technologies. In the long communication chain of globalization outputs seldom corresponds completely to inputs.[92] The contest of the transmitter is often different from the contest of the receiver. For people, who lose their jobs, the contingency of the economic crisis is much stronger than the relaxing message of TV-soaps.
- The medial power of globalization is reaching its limits, because it cannot really control the increasing social polarisation as resources run short. The world military expenditure reached in the last years new records.[93] Some western countries are going through an authoritarian phase.[94] The hope is that such developments shake up the minds.

Media are not only an instrument of social order. They can promote social change too – and it is the most important argument for a socio-cultural strategy for sustainability. The Bible is the best example of a medium that can change the world dramatically. A movie like "An Inconvenient Truth" by Al Gore made many people aware about climate dangers.

The cultural sector can be a fundamental engine of social change only provided that it is defunctionalized. A university, which is standardized and subordinated to the economic sector,[95] cannot really be a free laboratory for a better society. A press, whereas marketing plays a more important role than investigative journalism, cannot really support a democracy.

Herbert and Marshall McLuhan wrote *the medium is the message*:[96] what did they mean? The medium itself is transmitter and at the same time producer of cultural values. The globality is not only mediated, but probably also produced by media. If media contents are not independent from the media-type, then an oral culture will form a community in a different way than a written one. Watching the forest on TV is not experiencing the forest. A top-down-sustainability leads to a different development than a bottom-up sustainability. Therefore: for a social change oriented to sustainability we do not need only an "education for sustainability" or "TV for sustainability", but also *different media and communication structures*.

Christian religion and socio-cultural strategies for sustainability

The history of the cooperation between political and religious power is long. Especially the organisational form of the Catholic church which is opposite to that of a democracy. In the past, disobeying the pope used to be punished by the Inquisition (a victim: Giordano Bruno); at present by excommunication (two victims: Leonardo Boff and Ernesto Cardenal).[97]

Among Christians there are very fundamentalist organisations (i.e. Opus Dei,

the Society of St. Pius X, Christian Coalition) that support authoritarian political programmes.

The strong community sense of Catholics means also strong control of every member of the community: it inhibits the emotional and creative expression of individuals. In several religions arts, media and education are strongly functionalised.

Nonetheless, there are also several "sustainable" examples in the Christian religion. Liberation Theology promoted a bottom-up political change in Latin America, oriented towards social justice and solidarity. Christian organisations like Pax Christi, Misereor or Evangelischer Entwicklungsdienst[98] are integral parts of the international movement for *another world*. Churches, monasteries and missions are part of the last "public" places in a privatized society: they offer a possibility for reflexion and for personal communication.

Evolution

Biological evolution is the strategy that natural systems adopt to contrast the universal irreversible process of *entropy*[99] and to avoid the possibility of a systemic collapse. A not improbable danger: in the universe *Gaias* are exceptions.[100]

The application of theories of system to the sociological research implies the possibility of a *social evolution*. According to Jürgen Habermas every social change impetus can lead to an *innovation* or to a *dead-end*.[101] He defines "social evolution" as a "process of acquisition of learning mechanisms, that makes a society able to develop itself on different levels, so that it can escape the impending 'evolutive dead-ends' and become a 'good' society".[102] Social evolution means a "collective learning process and a societal improvement of learning capacities".[103]

There is a *cultural evolution* too, that interplays with the biological and social one (co-evolution). The gradual transformation of the ape into the human was primarily an intensive evolution of culture combined with the evolution of its genetic prerequisites (i.e. capacious brain, talking apparatus). While natural evolution operates through genes that store information and transmit it to the next generation, cultural evolution operates through non-physical replicators called *memes*.[104] The mixing of different genes strengthens the species against diseases, and the mixing of different memes expands the cultural spectrum of options to solve problems. If *monocultures* make ecosystems and social systems prone to crisis,[105] then *cultural diversity*[106] is for the sustainability of a society as important as the biodiversity for the crisis resistance of an ecosystem.[107]

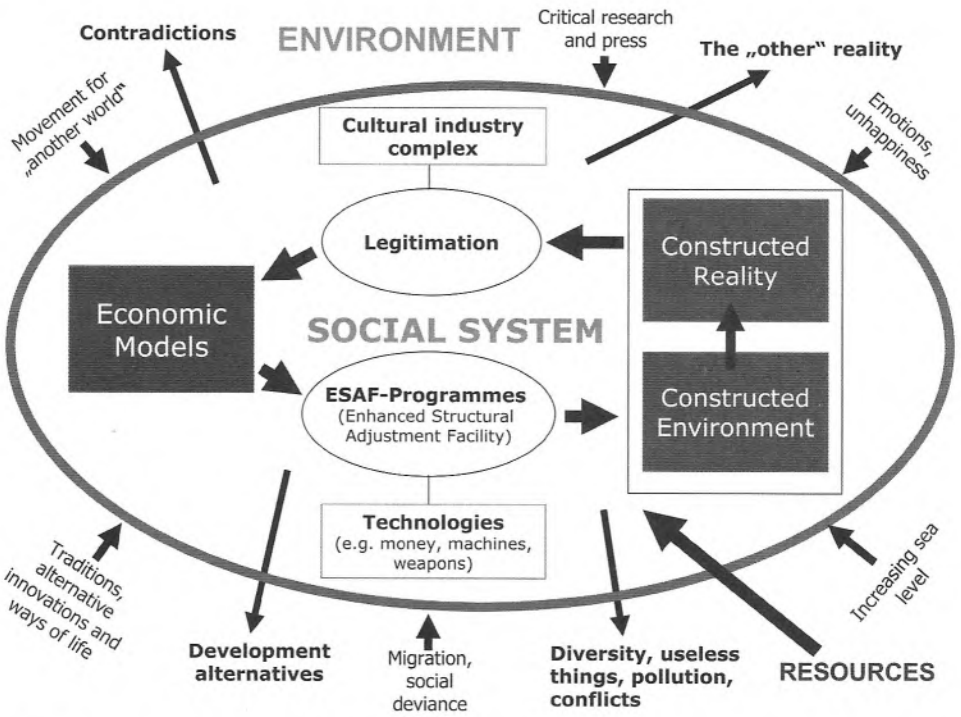
What inhibits and what promotes a cultural evolution of our society?

Elements of cultural evolution

Inhibitory factors of cultural evolution can be found in unsustainable development. The characteristics of modernization and globalization – or simply of *The*

development[108] – are the expression of a monological self-referentiality of the social system at the expense of its dialogical communication with the environment. In such a context the developmental dynamics aims for (a) a strong internal rationalization; (b) the internalization of resources from the environment; (c) the externalization of disorder, contradictions, conflicts and rubbish to the environment; (d) the transformation of societal boundaries into "dykes" and "walls", that protect the systems against environmental reactions (e.g. climate change, migrations, social conflicts) as well as against systemic changes (e.g. police against demonstrations, limited press freedom). These societal walls are designed according to *walls in the mind* – and strengthen walls in the mind by hindering environmental perception and communication in addition. The internalisation of these "walls" by the members of the social system causes alienation, isolation and conformity.[109]

The following graphic describes the development model of neoliberal globalization combining these considerations with the results of the analysis in the above paragraph on "complexity".



5 The self-referential dynamics of the neoliberal globalization

The environmental crisis is not only the result of a growing social and ecologic pressure on the boundaries of the social system, but also of an increasing *derealization*:

while the social system "feels" only the own artificial ordered reality, it is "insensitive" toward the rest.

This derealization is supported by the combined action of the following three factors:

- *Structures of social inequality*. Social inequality and power are reproduced and supported by social (e.g. networks, cliques), symbolic (i.e. status symbols) and cultural structures (i.e. selection in the educational system).[110] The inequality between nations, classes or people is the precondition of the possibility to internalize profits and externalize costs.[111] A context of social inequality promotes the universalization and institutionalization of the *strongest* argument – and not necessarily of the *best* one. In asymmetric social structures privileged people have more influence on the determination of development, whereas people who suffer more from development costs have no power, knowledge and capacity to change the situation. While poor people "think about bread and not about global problems",[112] rich people do not really worry about crises, because their wealth is an insurance for a personal good future. We should not forget: in the Cold War the bigger danger (besides the nuclear bombs) was the sense of security of those who possessed a nuclear bunker.
- *Technology*. Until technology can "adapt" the environment to the social system, the social system will avoid any adaptation to the environment. The "monetarization" of society offers the possibility to control anybody who needs money to survive. The mass media hide the reality through a diffusion of the viewpoint of the societal centres.[113]
- *Ideology (self-referential worldview)*. When the cause of problems are proposed as solution, then social systems are probably affected by ideology. Our dominant ideology consists of a specific understanding of nature, humanity and of course economy. Pierre Bourdieu analyses the neoliberal discourse as a form of "symbolic power": "the increasing economization of society would not be possible, if the market model did not advance to an ideal for all societal sectors and did not appear as 'natural' development without alternatives."[114] Fred Hirsch assumes that the (unequal) economic growth is not pushed by necessity, but by the culturally determined will to stand out from the mass.[115] In Western societies the question is not what kind of need, but which social status the need symbolizes. The "affiliation" to the upper-class is signed by the capacity to satisfy needs, that other classes cannot satisfy: what matters is not the absolute but the relative possession of money, of power or of knowledge, what one possesses more than others, the exclusivity. Economic growth (at the expense of nature and the Third World) is the strategy to guarantee social harmony in a democratic society in spite of an internal social inequality.[116]

Also the positive acceptance of technologies has today ideological traits. Part of the dominant ideology is the fear of conflicts, anarchy and chaos, which means the

fear of any social change. Ideologies often produce, promote or use strong concepts of enemy to legitimate themselves.

The combined action of these three factors can be resumed with the motto: *Wisdom is power,*[117] *but power makes stupid*. Hierarchies and learnability tend to exclude each other: if one can impose his opinion on others, one must not learn from others. If one has been able to adapt the environment to one's own system of privileges, one will not be very interested to give up this system in order to protect the environment.

Unfortunately the social system cannot permanently lock out reality and environment – and sooner or later it pays a high cost for that.[118] A societal crisis is the consequence of a growing gap between worldview and reality. The reality that the social system excluded for a long time from their own perception, suddenly comes through the crisis into the system, massively.

What promotes a cultural evolution? An important difference between biological and cultural evolution is the human capability of *(self-)reflexivity*. On the one hand we can feel the coming dangers as well as our responsibility for destruction and suffering we cause. On the other hand (self-)reflexivity is also a chance to overcome the global crisis: the possibility to *learn a priori*. In the XXI century, sustainability cannot be a learning process *after* the "global collapse":[119] it is a sufficient motive for defining sustainability as the main *cultural* challenge in this century.

The circular self-reproductive mechanisms of the unsustainable development has to be broken through *cultural mutations*. Ideologies can be counteracted through a critical way of thinking, disobedience, intercultural exchanges, open political debates on contradictions. Of course arts are an ideal source of cultural mutations.

The sustainability of social and cultural systems depends from the *flexibility*[120] and the *sensitivity* of their boundaries. The *societal senses* percept the reality and politicize the inputs from the external and inner environment into the social system. Therefore the collective awareness of the impending global crisis and the necessity of a radical reaction depends on "healthy" societal senses. Who or what holds that function? For example non-governmental organisations, the civil society, an independent scientific research and a free press, maybe psycho-therapeutical groups. Migrants are an important bridge to the global reality, too.

Christian religion and cultural evolution

While cultural diversity is an important precondition of collective learning processes, the Christian religion is traditionally based on a strong assumption of exclusivity. Joseph Ratzinger considers the "dictatorship of relativism" as one of the worst evil of the Modern age.[121] With that assumption he goes the same missionary way that inspired colonization, the "Manifest Destiny" of the USA[122] as well as the globalization of a monoculture. The strong hierarchy of the Catholic church inhibits a necessary renewal of this confession. It's clergy often sticks to a conservative ideology,

in that (their own?) sexual complexes get much more attention than the impending environmental catastrophe. Several scandals[123] seem to confirm the assumption of Sigmund Freud, that "hyper-morality" and "perversion" are often two sides of the same coin.[124] The strong sexual morality could have an inhibitory influence on social changes too.[125]

The superficial image of the Western as strong and courageous society covers up a deep fear of alternatives and of the alien. It could be a heritage of the atmosphere of fear in the Middle Ages too, when Christianity used a wide iconography of the devil for its propaganda. But the *Apocalypse*[126] is not a (divine) destiny, and another world is possible.[127] The "protestants" rebelled against the power of the clergy. In the Catholic church itself there are winds of change. The Christian *belief* in a better world promotes a cultural evolution. Christianity is a bridge between centres and peripheries and rich and poor people, but also between their own social role and their own humanity.

Conclusions

The story of the Easter Island reveals the *ambivalence* of (high) cultures: these people made their own island into a World Heritage Site,[128] simply by destroying themselves. But the Rapanui were not more "stupid" than modern humans. Despite two World Wars and the danger of a final Third World War, worldwide military expenditures reached in 2007 a record height of 1.34 trillions dollars.[129] While the worst ecologic catastrophe in millions of years is impending, governments throw away huge amounts of public resources to "save" the virtual financial markets and the automotive industry.

The Rapanui felled the last palm on their island while building the biggest Moai. In the same manner the "success" of the Western culture is today the major threat for our future.[130] The famous principle of the "survival of the fittest" by Herbert Spencer[131] evidently conflicts with another principle: the creature that wins against their own environment destroys itself.[132]

How can we avoid a "suicide of the fittest"?

The social and cultural dimensions of un/sustainability should be paid much more attention. A *cultural* perspective on societal development is indispensable, because:

- We cannot discern global problems through a microscope. Our parcelled knowledge needs an integrative moment that promotes an holistic worldview.
- In the natural, economic and social sciences there is a lack of *(self-)reflexivity*. The cultural perspective means an "ethnology of the culture to which we belong"[133] and a consideration of individuals as part of the observed reality, that they are

interpreting and changing at the same time.[134] There is no "neutral" scientific research.

- Although the western viewpoint is the dominant one (especially in the processes of globalization), it is not necessarily the best one or even the only one. The social sciences often describe the western society *as if* it were the whole world. The cultural perspective is not only a critical and undogmatic approach, but also a way to promote a necessary altercation with other viewpoints through an intra- and intercultural dialogue.
- The problems do not lead a society to the crisis more than the false reaction to the problems. The significance of cultural factors in a crisis situation is confirmed also by the fact that different societies react in a different way to similar challenges.[135]

What inhibits and what promotes a change of society into sustainability? I summarise some results from this chapter:

- Globalization is a "monocultural programme" for the global reduction of complexity and the standardization of diversities. Several *myths* promote a dangerous overestimation of human and technologic capacities. Today social inequality, mass media and technologies play a very important role in the social construction of reality and of the environment, that contributes to the impending global crisis. The sustainable development is a systemic and structural alternative to globalization, based on diverse cultur*es* of sustainability. The awareness of the human limits is the awareness of the relativity of our social and cultural production. Dialogue, cooperation, democracy, sharing of things and intercultural exchange belong to the "natural" strategies of supplementing the limited individual capacities through collective ones – but it needs a positive understanding of humanity.
- Also a culture of sustainability presupposes social providers and media to be effective. The "what" of a message is not independent from the "how" it is communicated. Sustainability does not mean more attention for environmental topics in the given university and TV, but in another university and TV.
- Societal crises are also caused by a growing derealisation of the social system – that is, by a strong self-referentiality, stiff boundaries and a weak environmental sensitivity. The combined action of social inequality, ideology and technology inhibits the social change into sustainability. However "collective learnability" is promoted by critical thinking, curiosity, imagination, intercultural communication and social laboratories. Civil society, (a defunctionalized) research, art and press are "societal senses" that promote the perception of reality and politicize environmental inputs to the social system. The combination of social system and personality makes an overall system able to evolve.[136] Cultural evolution is a fundamental component of sustainability. For sustainability the way is the goal and the goal is the way.

Because the structures of unsustainability are internalized by most people and institutions, "the capitalist society cannot be changed only through a will of radi-

cal change or through rational decisions".[137] The boundary between unsustainability and sustainability, between social order and alternatives goes through society, institutions and individuals.

Also Christianity is crossed by a strong *ambivalence*. On the one hand the Christian religion promotes an overestimation of the human being, on the other an awareness of its limits in front of God. On the one hand "religious beliefs" are out of question and exclude any real dialogue; on the other hand we need to "believe" in a reality outside of our cognitive limits, in not-yet-realities like social justice, peace or sustainability. Maybe God created the human in his own image, maybe humans created God(s) in their own image.[138]

It is very difficult to analyse how the ambivalence of Christianity is interconnected to the ambivalence of our society and culture, but both cases seem to prove what Michel Foucault said: no power can be possessed, but every kind of power has a relational character; there is no power without a countervailing power.[139]

In Christianity, in Western societies and in me there is a powerful order, but also dynamic movements. Although I belong to this society and culture (and they are part of mine), I wish for a radical change. The social change into sustainability is an interior evolution too,[140] that free our emotions and vital imagination, transforming the own alienation into cultural and political creativity.

Notes

1 Diamond.
2 Carson.
3 The sociologist Bernd Hamm (1996) catalogues the indicators of the impending global crisis in its three dimensions. Growing world population, lack of resources, disappearance of biodiversity, cementification, climate change and health diseases (i.a.) are indicators of the ecological dimension. Public indebtedness, concentration of profit, deregulation, virtualization of the economy, unemployment (i.a.) belong to the economic dimension. Lack of democracy, corruption, social polarization, poverty, privatization of the public spaces, growing military expenditures and wars (i.a.) belong to the societal dimension. The cultural indicators (e.g. anomie, concentration on the press market) are listed under the societal category. Globalization leads to a stronger interplay and reciprocal alimentation of the three dimension of the global crisis.
4 Cf. Habermas (1979).
5 Diamond, 138.
6 Ibid, 118.
7 Ibid, 140.
8 Ibid.
9 Ibid, 121.
10 Ibid, 126.

[11] Researchers founded a still bigger, but unfinished Moai in a quarry: 21 Meters in height and 270 tons in weight.
[12] Diamond, 141.
[13] Ibid, 142.
[14] Ibid, 141.
[15] Ibid, 147.
[16] Socrates said "knowledge is virtue."
[17] Boas, 589.
[18] Cf. Kant.
[19] Korzybski.
[20] Cf. Bateson (1972).
[21] Tolman, Downs, Stea.
[22] Kandel.
[23] Berger, Luckmann.
[24] Hofstede and Hofstede.
[25] Moebius, 97, on Michel Foucault's theories.
[26] Wittgenstein.
[27] Meadows.
[28] Bourdieu (1982).
[29] Esser, 375.
[30] I.a. René Descartes (1596-1650), Francis Bacon (1561-1626) and Isaac Newton (1642-1726).
[31] Speech of Winston Churchill in the House of Commons, 28 October 1943.
[32] Horkheimer, 84-85.
[33] Hösle, 59.
[34] Peter Kareiva, 2008: "Ominous trends in nature recreation", PNAS 105, 2757-2758.
[35] Jäger, Weinzierl, 70.
[36] White.
[37] "Sermon on the Mount", in: Cross.
[38] Hösle, 17; Umweltrat der Bundesregierung (1994); Unesco (1998); Kurt, Wagner.
[39] Tarozzi.
[40] Kurt, Wagner, 13.
[41] The most frequently quoted definition of sustainable development is that of the "Brundtland Report" (1987) by the World Commission on Environment and Development (WCED): "Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
[42] Cf. Eblinghaus, Stickler.
[43] Cf. Tarozzi.
[44] The main thesis of Dependencia theories is that the underdevelopment of countries and peoples is caused by the development of others: there is no poorness without richness. Therefore underdevelopment can be counteracted more by freeing from the exploitation (self-reliance) than through "development aid". This orientation, that had its most vivid period in the 60s and 70s in Latin America, represented the theoretical mouth of the meeting between Liberation Theology and Neo-Marxist analysis.
[45] Commoner.

[46] Vester.
[47] Cf. Hösle.
[48] Griefahn, 66.
[49] Meadows (1972), (2004).
[50] Nida-Rümelin, 7.
[51] Hirsch.
[52] Latouche.
[53] Bauman, Ahrens, 27.
[54] Halbwachs.
[55] White.
[56] Ibid.
[57] Hösle, 54.
[58] Bury, 48.
[59] White.
[60] Durkheim (1893), (1912).
[61] Durkheim (1897).
[62] Weber.
[63] Article "Indulgences", in Cross. A famous quotation from Luther's Thesis 28 is: "As soon as a coin in the coffer rings, a soul from purgatory springs".
[64] Former professor of mechanical engineering at the University of Clausthal and former President of the German branch of the Club of Rome.
[65] The *strategy of efficiency* aims to solve ecologic problems through the development of new technologies and a more efficient use of resources. The *strategy of consistency* concerns the tolerability of anthropogenetic material flows for geogenetic material flows. The *strategies of sufficiency* plead a limitation of production and consumption as well as a demographic control.
[66] Hobbes.
[67] Nünning, 21.
[68] McLuhan (1964).
[69] The German translation of "sustainability".
[70] Voss, 5.
[71] Mantau, 1274.
[72] German Federal Ministry for Agriculture (2009).
[73] Michael S. Northcott's chapter in this book.
[74] Jänicke.
[75] Rieger, Leibfried, 13.
[76] Ivan Illich defines the modern human as "homo miserabilis": because of unlimited needs, it is always poor, for example poor of time. Illich calculated, how much time an ordinary American spends for his car at the end of the 70s: for earning the money to buy it, for driving and for repairing it, he spends 1,600 hours (67 days) per year, 4.5 hours per day.
[77] According to Alberto Magnaghi *deterritorialization* means for example, that everything can be produced or bought everywhere in every time; that cities or individuals are uprooted from their history and own identity.

[78] According to Tarozzi and Magnaghi the fundamental principles of *self-sustainability* are: (a) Decentralization, self-reliance and self-government; (b) satisfaction of basic-needs; (c) eco-development and circulation's economy.
[79] Guidicini, 12.
[80] Magnaghi, 107.
[81] Reisch, Scherhorn.
[82] Luhmann (1992), 96-97.
[83] According to Marshall McLuhan (1964) the media-technology is an extension of the human senses.
[84] Cf. Merten, Schmidt and Weischenberg.
[85] Sennett, 22-25.
[86] Cf. Adorno, Horkheimer, 126-181.
[87] Cf. Klein.
[88] Hamm (2006), 280.
[89] Bukow, Ottersbach, 73.
[90] Two examples: organic food is today a "big business"; the environmental protest lead in the 80s to the establishment of Ministries for environment.
[91] Brokers and investment bankers move everyday billions dollars around the world, as if they played a computer game. But the consequences are sometimes bitter reality for many other people. The distance between culprits and victims of the globalized economy is similar to the distance between bomber pilots and bomber victims.
[92] Sennett, 32.
[93] SIPRI.
[94] E.g. in the USA, in Italy and in Austria.
[95] Cf. the European Bologna Process.
[96] McLuhan (1969).
[97] Charismatic representatives of the Liberation Theology in Latin America.
[98] <http://www.eed.de/en/>, 11 March 2009.
[99] Rifkin.
[100] Anne Primavesi's chapter in this book.
[101] Habermas (2006).
[102] Jäger and Weinzierl, 28.
[103] Ibid, 30.
[104] Dawkins.
[105] Shiva.
[106] Cultural diversity not only exists in the difference between Muslims, Jewish people and Christians, but also in sub-cultural diversity within the society.
[107] Unesco (2001).
[108] Sachs.
[109] Chabot, 805-808.
[110] Bourdieu (1983).
[111] Chomsky.
[112] Meadows, 13.
[113] Cf. Merten, Schmidt, Weichsenberg.
[114] Moebius, 133.

[115] Hirsch.
[116] Hösle, 32.
[117] Bacon, *Meditationes sacrae*, 11th article "De Haeresibus".
[118] Cf. the fourth principle of ecology by Barry Commoner: *There is no such thing as a free lunch.*
[119] Diamond, Beck.
[120] Finke, 264.
[121] Joseph Ratzinger, (2005, April 18th): *Missa pro Eligendo Romano Pontefice*, <http://www.vatican.va/gpII/documents/homily-pro-eligendo-pontifice_20050418_it.html>, accessed on 7 February 2009.
[122] It represents the American doctrine of the 19th century, that the USA has got a divine commission of expansion in the world. The Manifest Destiny was published by John L. O'Sullivan in 1839 in the journal "The United States Democratic Review" (cf. Stephanson).
[123] E.g. in Churches and Seminars in the USA, Switzerland, Austria and Germany.
[124] Freud.
[125] Reich (1949), (1963).
[126] Stefan Skrimshire's chapter in this book.
[127] Motto of the World Social Forum, <http://www.forumsocialmundial.org.br>, 23 May 2009.
[128] Unesco, <http://whc.unesco.org/en/list/715>, 5 March 2009.
[129] Cf. SIPRI (2008).
[130] Bovet, Rekacewicz et al., 46.
[131] Spencer, Vol. I, § 164.
[132] Bateson (1972), 514.
[133] Foucault, Carrette, 91.
[134] Cf. Bateson (1979).
[135] Diamond, 29.
[136] Habermas (2006).
[137] Bourdieu (1982).
[138] Feuerbach (1851), 241.
[139] Moebius (2009), 94.
[140] Bateson (1979), 199.

References

Adorno, Theodor W. and Horkheimer, Max (1947), *La dialettica dell' illuminismo,* Torino: Einaudi (new edition 1966).

Bacon, Francis (1597), *Essayes: Religious Meditations, Plaies of Perswasion and Disswasion,* London.

Bateson, Gregory (1972), *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology*, Chicago: University of Chicago Press (new edition 2000).

— (1979), *Mind and Nature, A Necessary Unity (Advances in Systems Theory, Complexity, and the Human Sciences)*, New York: Hampton Press.

Bauman, Zygmunt and Ahrens, Uwe (1992), *Dialektik und Ordnung: Die Moderne und der Holocaust*, Hamburg: Europäische VA.

Beck, Ulrich (2007), *Weltrisikogesellschaft: Auf der Suche nach der verlorenen Sicherheit*, Frankfurt am Main: Suhrkamp.

Berger, Peter and Luckmann, Thomas (1966), *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*, New York: Anchor Books.

Boas, Franz (1887), "Museums of Ethnology and their classification", *Science* 9, 485-486.

Bourdieu, Pierre (1982), *Die feinen Unterschiede: Kritik der gesellschaftlichen Urteilskraft*, Frankfurt am Main: Suhrkamp.

— (1983), "Ökonomisches Kapital, kulturelles Kapital, soziales Kapital", in: Reinhard Kreckel (ed.), *Soziale Ungleichheiten*, Göttingen: Schwartz, 183-198.

Brocchi, Davide (2008), "The Cultural Dimension of Sustainability", in: Sacha Kagan and Volker Kirchberg (eds.), *Sustainability: A New Frontier for the Arts and Cultures*, Frankfurt: VAS, 26-58.

Bukow, Dietrich and Ottersbach, Markus (1999), *Die Zivilgesellschaft in der Zerreißprobe*, Opladen: Leske + Budrich.

Bury, John (1932), *Storia dell'idea del progresso,* Milano: Feltrinelli (new edition 1979).

Carson, Rachel (1962), *Silent Spring*, New York: Houghton Mifflin.

Chabot, Sean (2008), "Love and Revolution", in: *Critical Sociology* 34, 803-828.

Chomsky, Noam (1998), *Profit Over People: Neoliberalism and Global Order*, New York: Seven Stories Press.

Commoner, Barry (1971), *The Closing Circle: Nature, Man, and Technology*, New York: Random House Inc.

Conti, Laura (1983), *Questo pianeta*, (This Planet), Rome: Editori Riuniti.

Cross, F. L. and Livingstone, E. A. (eds.) (2005), *The Oxford Dictionary of the Christian Church,*New York: Oxford University Press.

Darwin, Charles (1859), *On the Origin of Species by means of natural selection, or the preservation of favoured races in the struggle for life*, London: John Murray.

Dawkins, Richard (1976), *The Selfish Gene*, Oxford: OUP.

Diamond, Jared (2006), *Kollaps: Warum Gesellschaften überleben oder untergehen,*Frankfurt am Main: Fischer.

Downs, Roger and Stea, David (1973), *Image and Environment: Cognitive Mapping and Spatial Behavior*, Edison: Transaction (new edition 2005).

Durkheim, Emile (1893), *De la division du travail social*, Paris: Les Presses universitaires de France (new edition 1967).

— (1897), *Suicide*, New York: Free Press (new edition 1997).

— (1912), *Les formes élémentaires de la vie religieuse,* Paris: Les Presses universitaires de France (new edition 1968).

Eblinghaus, Helga and Stikler, Armin (1996), *Nachhaltigkeit und Macht: Zur Kritik von Sustainable Development*, Frankfurt am Main: IKO-Verlag.

Esser, Hartmut (2000), *Soziologie: Spezielle Grundlagen, Die Konstruktion der Gesellschaft*, Frankfurt am Main: Campus.

Feuerbach, Ludwig (1851), *Vorlesungen über das Wesen der Religion*, Leipzig: Verlag von Otto Wigand.

Finke, Peter (2003), "Kulturökologie", in: Nünning and Nünning, 248-279.

Foucault, Michel (1999), *Religion and Culture by Michel Foucault*, ed. by J. Carrette, Manchester: Manchester University Press.
Freud, Anna (ed.) (1986), *Sigmund Freud: The Essentials of Psycho-Analysis*, New York: Penguin.
German Federal Ministry for Agriculture (2009), *Ergebnisse der Waldzustandserhebung 2008*, Berlin.
Giddens, Anthony (ed.) (1972), *Emile Durkheim: Selected Writings*, London: Cambridge University Press.
— (1989), *Sociology*, Cambridge: Polity Press.
Griefahn, Monika (2002), "Nachhaltigkeitspolitik und Kulturpolitik – eine Verbindung mit Zukunft?" in: Kurt and Wagner, 59-67.
Guidicini, Paolo (1996), *Manuale per le ricerche sociali sul territorio,* (Handbook for Social Research on Territory), Milan: Franco Angeli.
Habermas, Jürgen (1979*), Communication and the Evolution of Society*, Boston: Beacon Press.
— (2006), *Theorie des kommunikativen Handelns*, Frankfurt am Main: Suhrkamp.
Halbwachs, Maurice (1992), *On Collective Memory*, Chicago: University of Chicago.
Hamm, Bernd (1996), *Struktur moderner Gesellschaften,* Opladen: Leske + Budrich.
— (2006), *Die soziale Struktur der Globalisierung,* Berlin: Kai Homilius Verlag.
Hirsch, Fred (1977), *Social Limits to Growth*, London: Routledge.
Hobbes, Thomas (1651), *Leviathan*, New York: Penguin (new edition 1982).
Hofstede, Geert, and Hofstede, Gert-Jan (2004), *Cultures and Organizations: Software of the Mind*, New York: McGraw-Hill.
Horkheimer, Max (1947), *Eclisse della ragione: Critica della ragione strumentale*, Torino: Einaudi (new edition 1969).
Hösle, Vittorio (1991), *Philosophie der ökologischen Krise*, München: Beck.
Illich, Ivan (1981), *Per una storia dei bisogni,* Milan: Mondadori.
Jäger, Wieland and Weinzierl, Ulrike (2007), *Moderne soziologische Theorien und sozialer Wandel,* Wiesbaden: VS Verlag für Sozialwissenschaften.
Jänicke, Martin (2007), *Megatrend Umweltinnovation: Zur ökologischen Modernisierung von Wirtschaft und Staat,* München: Oekom.
Jerman, Tina (ed.) (2001), *ZukunftsFormen – Kultur und Agenda 21,* Essen: Klartext.
Jischa, Michael (1999), "Das Leitbild Nachhaltigkeit und das Konzept Technikbewertung", *University of Potsdam: Brandenburgische Umweltberichte (BUB),* 5/1999, 81-94.
Kandel, Eric (2007), *Auf der Suche nach dem Gedächtnis: Die Entstehung einer neuen Wissenschaft des Geistes*, München: Pantheon.
Kant, Immanuel (1781), *Critique of Pure Reason*, New York: Dover Publications Inc (new edition 2004).
Klein, Naomi (2002), *No Logo!* 2. ed. Gütersloh: Riemann.
Korzybski, Alfred (1933), *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics*, Chicago: Institute of General Semantics, (new edition 1994).
Kurt, Hildegard and Wagner, Bernd (eds.) (2001), *Kultur – Kunst – Nachhaltigkeit,* Essen: Klartext Verlag.
Latouche, Serge (1996), *The Westernization of the World: The Significance, Scope and Limits of the Drive Towards Global Uniformity*, London: Paperback.
Lotman, Jurij M. and Uspenskij, Boris A. (1975), *Tipologia della cultura*, Milano: Bompiani.

Luhmann, Niklas (1984), *Soziale Systeme: Grundriss einer allgemeinen Theorie*, Frankfurt am Main.
— (1992), *Comunicazione ecologica: può la società moderna adattarsi alle minacce ecologiche?* Milan: Franco Angeli.
Magnaghi, Alberto (2000), *Il progetto locale*, Torino: Bollati Boringhieri.
Malthus, Thomas Robert (1798), *Essay on the Principle of Population*, New York: Dover Pubn. Inc (new edition 2007).
Mantau, Udo (1996), "Konstruktionsfehler im Nachhaltigkeitsdenken", *AFZ/Der Wald*, Nr. 23, 1274-1278.
McLuhan, Marshall (1964), *Understanding Media: The Extensions of Man*, Cambridge Mass.: The MIT Press (new edition 1994).
— (1969), *Das Medium ist die Botschaft*, Frankfurt am Main: Suhrkamp.
Meadows, Dennis (1972), *Die Grenzen des Wachstums*, Stuttgart: DVA.
— et al. (2004), *The Limits to Growth: The 30-Year Update*, White River Jct., Vermont: Chelsea Green.
Merten, Klaus, Schmidt, Siegfried and Weichsenberg, Siegfried (eds.) (1994), *Die Wirklichkeit der Medien: Eine Einführung in die Kommunikationswissenschaft*, Opladen: Westdeutscher Verlag.
Moebius, Stephan (2009), *Kultur*, Bielefeld: Transkript.
Nida-Rümelin, Julian (2001), "Partizipation im Kulturbetrieb", in: Jerman, 7.
Nünning, Ansar and Nünning, Vera (2003), *Konzepte der Kulturwissenschaften*, Stuttgart: J. B. Metzler.
Reich, Wilhelm (1949), *Character-Analysis*, New York: Orgone Institute Press.
— (1963), *La rivoluzione sessuale*, Milan: Feltrinelli.
Reisch, Lucia and Scherhorn, Gerhard (1998), "Wie könnten nachhaltige Lebensstile aussehen? Auf der Suche nach dem ethischen Konsum", in: *Der Bürger im Staat*, Stuttgart: Landeszentrale für politische Bildung, Nr. 2.
Rieger, Elmar and Leibfried, Stephan (2004), *Kultur versus Globalisierung*, Frankfurt am Main: Suhrkamp.
Rifkin, Jeremy (1981), *Entropy: A New Worldview*, New York: Bantam Books.
Sachs, Wolfgang (ed.) (1999), *The Development Dictionary: A Guide to Knowledge as Power*, London: Zed Books.
Sennett, Richard (2007), *The Culture of the New Capitalism*, London: Yale University Press.
Shiva, Vandana (1993), *Monocultures of the Mind*, London: Zed Books.
Stockholm International Peace Research Institute (SIPRI), *Yearbook 2008*, Oxford University Press, (<http://yearbook2008.sipri.org>).
Spencer, Herbert (1864-1867), *A System of Synthetic Philosophy; The Principles of Biology*, London & Edinburgh: Williams and Norgate.
Stephanson, Anders (1995), *Manifest Destiny: American Expansionism and the Empire of Right*, New York: Hill and Wang.
Stockholm International Peace Research Institute (SIPRI), *SIPRI Yearbook 2008: Armaments, Disarmament and International Security*, Stockholm: SIPRI.
Tarozzi, Alberto (1990), *Visioni di uno sviluppo diverso*, Torino: Gruppo Abele.
Tolman, Edward C. (1948), "Cognitive Maps in Rats and Men", *Psychological Review* 55, 4, 189-208.

Umweltrat der Bundesregierung (1994), *Umweltgutachten 1994,* Stuttgart: SRU.

Unesco (1998), *The Power of Culture,* Stockholm: Unesco-Conference.

— (2001), *Universal Declaration on Cultural Diversity – Adopted by the 31st session of the UNESCO General Conference*, Paris: Unesco.

Vester, Frederic (2002), *Die Kunst vernetzt zu denken: Ideen and Werkzeuge für einen neuen Umgang mit Komplexität*, München: dtv.

Voss, Gerhard (1997), *Das Leitbild der nachhaltigen Entwicklung – Darstellung und Kritik*, Köln: Institut der Deutschen Wirtschaft.

Weber, Max (1904), *Die protestantische Ethik und der Geist des Kapitalismus*, Erftstadt: Area (new edition 2005).

White, Lynn (1967), *The Historical Roots of our Ecologic Crisis*, in: A.E. Lugo and S.C. Snedaker (eds.), *Readings on Ecological Systems: Their Function and Relation to Man*, New York: MSS Educational Publishing (new edition 1971), <http://aeoe.org/resources/spiritual/rootsofcrisis.pdf>, 5 May 2009.

Wittgenstein, Ludwig (1921), *Tractatus Logico-Philosophicus*, New York: Dover Publications Inc. (new edition 1998).

World Commission On Employment und World Commission on Environment and Development (1987), *Our Common Future*, Oxford: Oxford University.